FLASHES AND PLUGS

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Alexander Graham Bell	Mar. 7, 1847

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The two women, who hadn't known each other previously, also came from the same town, Westbury.

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Telephony

THE JOURNAL OF THE TELEPHONE INDUSTRY

November 29, 1952

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★ ★ ★ IN THE ★ ★ ★ NATION'S CAPITAL

by FRANCIS X. WELCH — WASHINGTON EDITOR

Eisenhower's first cabinet appointments show not only "plenty of polish," but plenty of good hard substance, as well. . . . There are no amateurs "in the crowd." NARUC committee hits high corporate and excise taxes on telephone companies.

SEVERAL days ago most of the politicians around Washington (including both the "ins" and the "outs") were busy trying to pick General Eisenhower's new cabinet. Last week, with the revelation of most of the names, the emphasis shifted to polishing the *handles* of the new cabinet. Every lobby in town is trying to figure out a way to pull open the *drawers* so as to get an easy entrance.

But it is not easy. Ike's tentative appointments for a new cabinet have plenty of polish, but also plenty of good hard substance. There are no amateurs in the crowd, so far. One would have to look long and far to get a couple of more hard-boiled performers than John Foster Dulles in the State Department and Charles E. Wilson (General Motors, not General Electric) for the defense spot. Both of these gentlemen know their way around Washington and most other places very well indeed. There will be no "soft touches" in state or defense for any lobbyist, 5 per centers, or what have you.

Of particular interest to utilities, of course, was the naming of the Oregon governor, Douglas McKay, to be Secretary of Interior. McKay is relatively unknown on the East Coast. But his background, and what he stands for, throw quite a side light on the thinking of General Eisenhower along lines of business-government relations.

Telephone companies, as such, have little to do with the Interior Department, of course. But because Interior Department has become the largest electric power utility in the world (in terms of capacity and kilowatt hours sold), all forms of public utility life will naturally look to what happens in the Interior Department for a clew to Ike's attitude towards private enterprise in the utility business.

Superficially, Governor McKay is no enemy of public ownership. As mayor of Salem, Ore., he was one of the promoters of Willamette Valley Development and has helped efforts to develop the Columbia River Basin, particularly McNary dam. On the other hand, he has opposed Truman's Columbia Valley Administration very bitterly. This would set up a replica of TVA in the Pacific Northwest. Governor McKay preferred, instead, more "home rule" participation and less federal domination. He thinks such a relationship ought to be worked out in the form of interstate compacts, which would take the ball away from the federal government.

Reading between the lines, an observer can see why President-elect Eisenhower should select a man such as McKay for his cabinet. First, McKay is a western governor which should be an answer to those who are all too ready to accuse Ike of being under the thumb of Wall Street and eastern business influence. Secondly, he is familiar with, and sympathetic to, necessary federal development of federal water resources in the West. This should be an answer to those who would look over any Secretary of Interior appointed by Eisenhower with the expectation that the appointee might be a tool of the power trust. Third, Senator Morse (Independent), the Oregon rebel, is already reported to have made the expected remark about McKay being a "reactionary stooge," etc. The fact of the matter is, McKay's appointment was the neatest jab Ike could have made at Morse—appointing his own state governor to a post which Morse himself might well have enjoyed, if he had not suddenly jumped off the Eisenhower bandwagon. Morse's comments, under the circumstances, naturally sound like the girl in the back of the church talking about her rival walking down the aisle to a bridal ceremony.

Aside from purely political reaction, Governor McKay combines knowledge of the West and its problems with what appears to be a sane approach to the roles of state and federal governments in the development of hydroelectric power. He should be a refreshing occupant of the secretaryship of the Interior, after the incumbent Oscar Chapman.

Secretary Chapman's consuming desire to socialize the electric power industry has been apparent in his repeated efforts to thwart the plans of the Virginia Electric & Power Co. to build a great new dam at Roanoke Rapids, N. C. He and President Truman teamed up to promote the increasing intervention of the federal government in the field of power development.

Under the secretaryship of Governor McKay, it seems safe to say that this trend will be halted, and even perhaps reversed. As governor of Oregon, McKay has been strongly against the CVA, which would develop the Columbia River area on a huge scale.

REA Allocates $113,000

The Rural Electrification Administration approved one telephone loan allocation of $113,000 during the week of Nov. 10 to 14, that on Nov. 10 to Sewell Mountain Telephone Association, Danese, W. Va., to provide modern telephone service in Fayette County.

The newly-formed cooperative proposes to construct 27 miles of line and install automatic dial central office facilities to serve 386 rural subscribers. This mining community in the south central part of the state has had no previous telephone service.

In short, Governor McKay's appointment represents the type that was urged by Eisenhower in his recent campaign. President-elect Eisenhower denounced the "whole-hoggers" who want a "Columbia Valley Authority, a Brannan Plan, and socialized medicine," and urged that western resources be developed through "the full use of private resources plus a local-state-federal partnership" in reclamation programs. He declared at Seattle that power development in the Northwest "must and will go forward," but he stressed that "the first thing a new administration should do is to bring our state governments more into the picture." He added that "local and state governments should assume a greater influence in the planning, in the execution of plans, and in the administration of resource development projects.

As for the Tennessee Valley Authority, General Eisenhower said that it is "a great experiment," but that it should not be the "rigid pattern for such developments in other regions." This is all distinctly in the right direction, and a healthful antidote to the greater and greater encroachments by Secretary Chapman into the field of privately produced and distributed electric power. It is a lesson which should not be lost upon the telephone industry.

As these lines were written, General Eisenhower had not named his Secretary of Agriculture, who will have charge of the Rural Electrification Administration. While this is of more concern to the telephone business at the present time, the post of Interior secretary is even more strategically concerned with the real thinking of the new administration about its relation to all utility industries than the Secretary of Agriculture.

In short, the President-elect seems to have made a good start in the way of rehabilitating business-government relations. It has been a long time—20 years in fact—since anything of the sort could be said. If former President Roosevelt's late Secretary of Interior, Harold Ickes, was alive today, he probably would not like it at all. This is a capsule comment in itself.

Movies Pass the Hat

Telephone companies, groaning under the burden of a 15 per cent excise tax on monthly bills and 25 per cent tax on toll calls, should have some passing interest in an experiment by the owners of a neighborhood movie theater in Columbus, Ohio. For years—just about as long as telephone companies have been protesting—movie theaters have been petitioning Congress to ease the 20 per cent admission tax.

In recent months, with the rapid distribution of television sets, the movie people have really fallen upon hard times. It is not merely a case of some Hollywood movie producer mogul being reduced to his last penthouse, or some movie star scarcely able to afford alimony for three ex-wives. It is the *little* neighborhood operators who are suffering really bread and butter difficulties. The movie owner's fixed charges, in plant investment (the movie theater) plus his union contracts with projectionists and other employes run on. But the people who used to fill the place are staying away in droves, looking at the television in their own living rooms.

Neighborhood houses all over the country are reporting poor attendance and an economy wave has hit Hollywood which threatens to shake the Gold Coast worse than any earthquake, or "tremor" (as the residents euphemistically call them).

Naturally, in such a situation, the 20 per cent levy is not helping the theater owners. So, Lee J. Hofheimer and Albert L. Sugarman, owners of the "Little Theater," near Ohio State University on Columbus' north side, are having "free movies" every Wednesday night. There is a fish bowl in the lobby into which the "guests" may donate anything they see fit. Such donations are not taxable. Messrs. Hofheimer and Sugarman reported not only SRO (standing room only) business but an actual increase in revenues. Without disclosing whether the fish bowl donations measured up to the usual admission, the owners point out that an unusually heavy run on popcorn and candy sales made the evening so profitable that the owners are going to keep it up for awhile, and let Uncle Whiskers gnaw his fingernails.

One extra dividend of this experiment was its popularity with the patrons. Those leaving the theater, when "interviewed," were unanimously in favor of the management's policy. That is understandable enough. But they were also suddenly and dramatically made conscious of the heavy burden of federal taxes in a manner which, it is safe to say, they never appreciated before. The theater owners could spend plenty of money advertising their taxation problem without getting their message across any where near as clearly as the single "free movie" showing.

Of course regulatory rules against discrimination, state laws, obligations to file tariffs, and a lot of business difficulties would seem to prevent any telephone company from copying this interesting idea. It is a shame, too. Think how interesting it would be for a small telephone company to send all its subscribers receipted bills (without payment) for one month's service, and then ask them to drop "whatever you can" in a fish bowl on Main Street outside the company's office. For one thing, it would probably show how much the subscribers really think their service is worth. Would that be good? Each telephone official would have to think that one over for himself.

NARUC Tax Conscious

Telephone companies are not alone in their worry about the repressive effect of extraordinarily high taxes on the nation's telephone service. Commissioner Justus F. Craemer of the California commission is responsible for one of the highlights at the annual meeting of the National Association of Railroad & Utilities Commissioners at Little Rock, Ark., last month. He is chairman of the association's special committee on the effect of taxes on utility rates and presented that committee's report to the meeting.

Craemer's committee reported that the combined tax charges of the various privately owned utility groups for the year 1951 "amounted to staggering totals." It is interesting to note that the telephone companies ranked third, behind electric and water utilities, in percentage of operating revenues paid out in corporate taxes — $659,279,145 out of total operating revenues of $3,817,536,794, or 17 per cent. In excise taxes, telephone, telegraph, and radio paid out $375,361,992—an increase of 12.5 per cent over 1950.

"The telephone long-haul toll excise tax of 25 per cent is the highest non-luxury tax assessed against any service or commodity," the Craemer group's report stated, pointing out that it is greater than the generally accepted luxury tax level on such items as furs, diamonds, jewelry, and for admissions to cabarets and for club dues, which all carry a 20 per cent maximum excise tax. "Excise taxes on utility services are not only extremely burdensome but discriminatory as well. This is true, particularly in the instance of the 25 per cent tax on long-haul toll telephone service and the tax on transportation," said the report.

The report stated that the tax discrimination against telephone users is "grossly unfair," and recommended that the matter be called to the attention of Congress when the next tax bill is considered. The excise taxes on communications totaled $602,850,000 in the fiscal year 1950 and $670,261,000 in fiscal 1951, an increase of more than $67,000,000. Available figures for the

(Please turn to page 35)

We Brought TV to Our Town

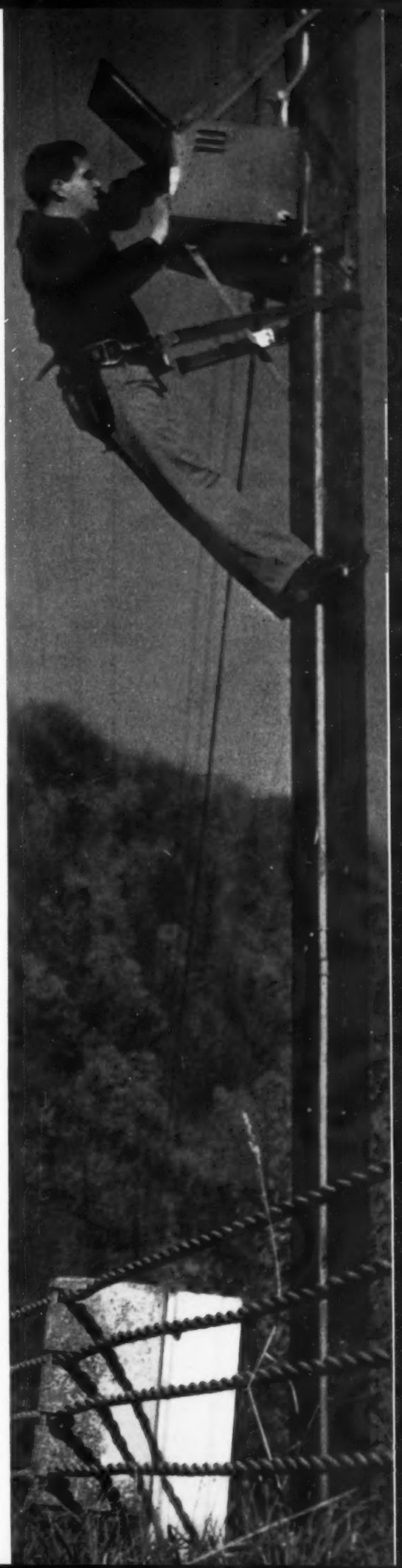
by JACK HAVERLY
Manager
Delaware Telephone Co.
Walton, N. Y.

THE editor of TELEPHONY invited me to prepare this article describing our efforts to bring television into our town of Walton, N. Y., through the formation of an antenna company —The Community Antenna System— which, in turn, has constructed a coaxial cable and antenna system through which the people of our town can receive video programs.

The fact that our telephone company and some of its personnel have played a big part in making this venture successful from the standpoint of rendering an additional modern communication service to our "isolated" (television-wise) town, should make it of interest to all telephone people.

With the view that other Independent telephone company owners who serve "isolated" communities might want to consider establishing television service in their towns, I am happy to respond to the request of TELEPHONY's editor that I present a report of our entrance into the television field.

The Community Antenna System officially came into being on Oct. 23 of this year. Co-owners of the Community Antenna System are my mother, Mrs. Cordelia Haverly, and myself. The system was founded for the purpose of supplying the village of Walton with snow-free television signals. The beautiful village of Walton, which lies at the foot of the Catskills, is surrounded by mountains ranging in height from 800 to 1,200 feet, which black out all television signals from the Walton area. This is with the exception of a faint signal of about 30 to 50 micro-volts which is received from Station WNBF-TV in Binghamton.



MRS. CORDELIA HAVERLY is watching son, JACK HAVERLY, install one of the seven amplifiers which transport the TV signal down the mountainside to Walton.

COMMUNITY ANTENNA SYSTEM

JACK HAVERLY showing MRS. CORDELIA HAVERLY how to operate a TV test set. Mrs. Haverly is co-owner of the antenna system and president of Delaware Telephone Co., Inc.

With the upsurge of television throughout the country, mother and I decided that steps should be taken to bring television to Walton, which had little hope in the immediate future of being able to receive television in any snow-free manner.

As a starter, we decided to see whether or not we could bring in a clear television picture in my mother's home, which is located in the center of Walton, and we started to investigate the possibilities of doing so. It was found that in the immediate vicinity of mother's home absolutely no picture or sound could be received, and after some experimentation, it was believed that a tower even 100 feet high would not help the situation. This meant that television would have to be brought down from one of the mountain tops around Walton.

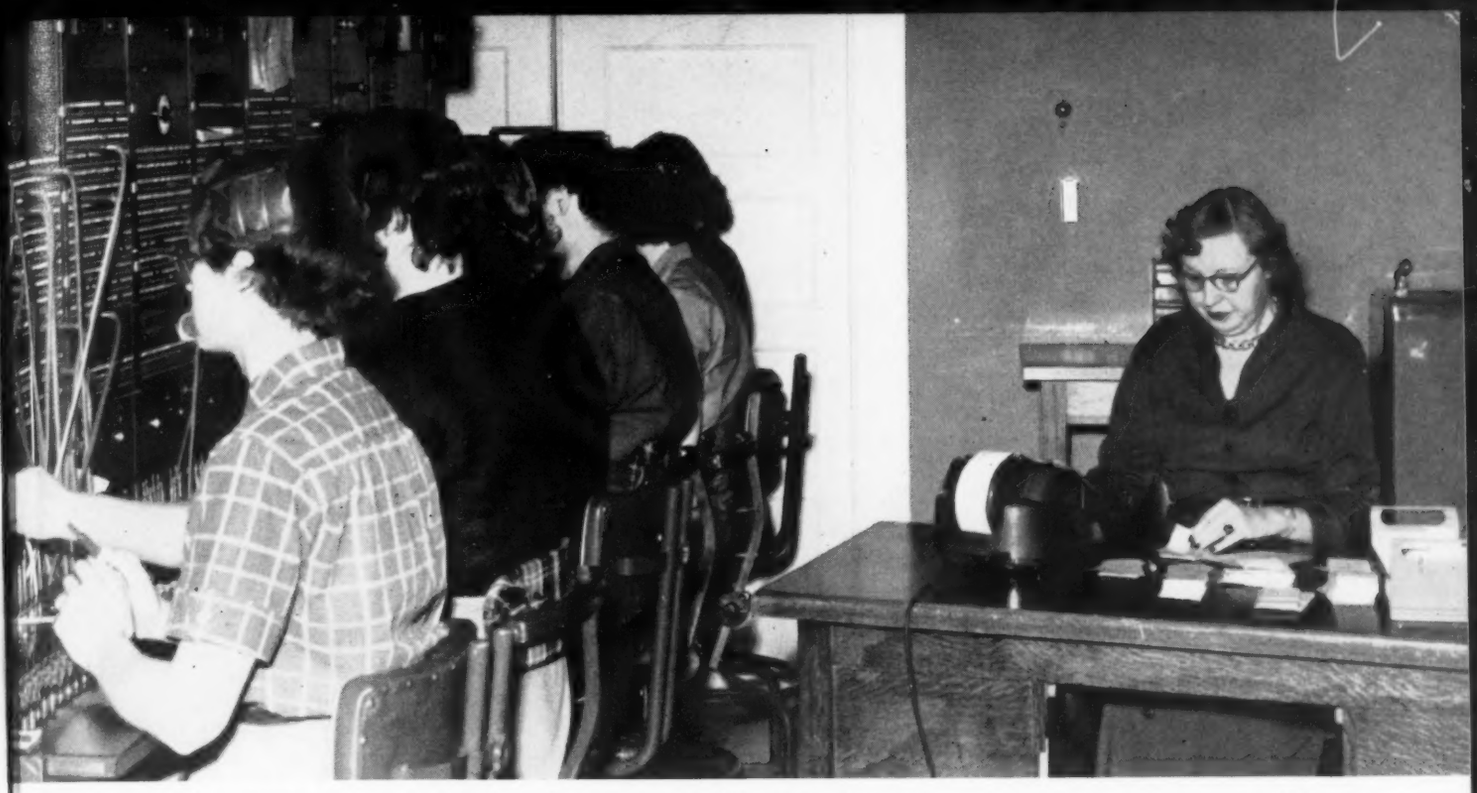
At this time, the idea of furnishing everyone in the village of Walton with television signals was just beginning to form. Many hours were expended testing for signals on the various mountain tops around Walton. The best results were obtained on Bear Spring Mountain, 2.9 miles from the village limits, and 2,400 feet above sea level. Station WNBF-TV at Binghamton came in very clearly on top of the mountain and with a tower 35 feet high, Syracuse and New York City could be received, but the latter two television signals were still snowy. It, therefore, was decided that a 100-foot tower should be installed, based on the fact that with previous tests, the higher the antenna was raised, the better the signal became. It was believed that with a 100-foot tower the signal would be satisfactory.

Construction crews were called in, electric and telephone service were extended to the tower site, and a foundation for the tower was dug. It makes us smile as we look back and think of the number of sticks of dynamite that were used on the top of Bear Spring Mountain to dig the holes. At the most, half a foot of dirt is all that covers the top of the mountain.

The tower was erected by the local telephone construction crews in a matter of seven hours. The micro-volts received at our present 2,500-foot-above-sea-level antenna from the Binghamton station, WNBF-TV, are approximately 700 micro-volts at the lowest point. The difference between a 35 micro-volt snowy picture in the village area and a 700 micro-volt crystal-clear picture, can readily be seen.

(Please turn to page 31)

EDWIN MILLER, installer-repairman installing a TV drop wire. The wire is tapped or spun to the .080 wire for support and stapled to the house with a new type of staple.



Charlotte Dick, chief operator of the Nappanee (Ind.) Telephone Co., using new super-quiet "figuring" machine in switchboard room of this progressive Hoosier Independent telephone company.

Noise Nuisance and Numbers *in the switchboard room*

By DONALD H. STOOPS, President, Nappanee (Ind.) Telephone Co.

NOISE, the louder the better, is a good thing on the Fourth-of-July, for children that is. At no time, however, is noise anything but an enemy of efficiency in a telephone switchboard operating room. Or, putting it another way, as the title suggests, noise is a nuisance that leads to neurosis. And, in a small exchange such as ours, where commercial and traffic operations overlap, the elimination of noise is especially difficult and presents problems not normally encountered in larger offices.

It is common knowledge that employes in the smaller exchanges are, of necessity, peculiarly versatile. Recognizing this fact, I will discuss the duties of our chief operator, Miss Charlotte Dick, who might better be classified as office manager (traffic and commercial). So in addition to serving as chief operator, Miss Dick makes the daily cash report, posts toll tickets, keeps the control records, peg count sheets, and performs many other commercial functions.

Much of her work requires the use of an adding, subtracting, dividing and multiplying machine. And because of the ease of operation and time saved through speedy operation, we have for years used only electric machines. But until recently these machines could only be used in a room completely isolated from the switchboard due to objectionable noise from the machines. Thus, the chief operator's most important duty—observing the operation of the switchboard—was impaired during about half her working day.

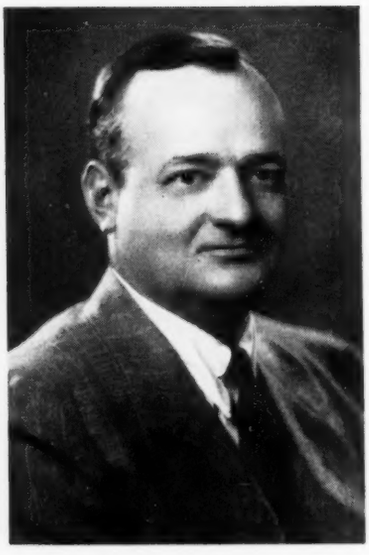
While visiting a neighboring telephone office recently, I noticed an electric machine in operation that I hadn't previously seen. It was surprisingly quiet and I decided to give it a try in our switchboard room. This machine was the Victor Adding Machine Co.'s custom electric 10-key job. A trial operation proved even better than expected. This machine is currently being used in the switchboard room within a few feet of all operators and not one of the girls has objected to its operation. As any one familiar with the telephone business knows, this *is* something!

It has been found that, because of reduced human efficiency caused by noise, millions of dollars are lost every year in American business. The time and tempo of today's business demand more and faster machines to do the work—even in the smaller telephone exchanges. The scratching of the quill pen has been replaced by the speedy click-clack of typewriters, figuring machines and other specialized mechanical business equipment.

With the increased use of such equipment, continuous effort has been made over the years by manufacturers to reduce unnecessary machine noises, thereby increasing individual operator and over-all office efficiency.

After many exhaustive tests and experiments, Victor has come up with its super-quiet custom machine, which is the type our chief operator uses in the switchboard room. The noise level of the machine has been greatly reduced—almost to a whisper—by "floating" the entire mechanism of the machine on rubber mountings so that it does not come in contact with the sound-reducing case. The metal case, almost completely lined with sound-absorbing felt, does not become a sounding board to amplify the noise, because the working parts of the computing machine are isolated from it.

L. W. HILL



R. E. WILLIAMS

Functions of the **CED** *of the* **NPA**

By E. C. ROYS
Vice President
General Telephone Co. of Michigan
Muskegon, Mich.

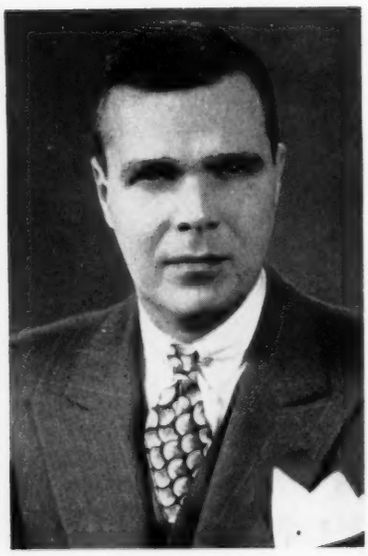
WHEN I was asked to present this paper, it was suggested that I tell you of some of the experiences I had while acting as director of the Communications Equipment Division of National Production Authority (NPA). It was up to me then to decide what the title of this address was to be. My first thought was to title it "Washington Confidential." Then I realized that this title had already been used and having previously read some of the work of Lait & Mortimer, I decided that the title "Washington Confidential" would not do at all.

Instead, I propose to talk about the functions of the Communications Equipment Division (CED) as it has been organized during the past year. I know you are familiar with some of these functions, but I think there are some you may not have heard about, which will be of interest to you.

Organization of DPA and NPA

First, I shall explain the relation between the Defense Production Administration (DPA) and the NPA. It is a line and staff relationship. The DPA is a staff organization, and does the program planning and policy making. The NPA is a line organization, dealing directly with industry, to apply the plans and policies developed by DPA.

"Telephone men left their affairs and homes to devote their talents to the betterment of their industry and their government"



W. M. DAY

E. C. ROYS

W. H. CHASE

DPA is a very small organization, having today less than 250 people. NPA when I first entered the organization had about 4,200 people. It is of interest to compare this figure with the figure for the War Production Board (WPB), an organization in World War II, which had at its peak over 20,000 people. In spite of its relatively small size, I found that NPA was operating quite efficiently and apparently much more smoothly than had its predecessor organization, the WPB.

NPA is organized in bureaus. The bureaus which deal with the producers of raw metals and prime metal products are composed of several divisions. For example, the Metals and Minerals Bureau has several industry divisions such as the Copper Division, the Iron and Steel Division, and the Light Metals (aluminum and magnesium) Division.

The Communications Equipment Division is one of the divisions of the Textile, Leather, and Specialty Equipment Bureau.

The personnel of NPA are, of course, principally government career people who are under civil service. However, most of the industry divisions of NPA and many of the staff offices in DPA are manned by people on loan from industry without compensation from the government, just as I was. There are some distinct advantages in this arrangement—both for government and for industry.

First, the presence of industry people in the divisions and bureaus insures that the impact upon industry of proposed changes and regulations will be immediately recognized and properly evaluated by people who have spent their lives working in the industry involved.

Second, the rotation of the industry people through these positions produces a reservoir which could be tapped in the event of an all-out emergency requiring quick expansion of the machinery for controls.

Third, because of having a sprinkling of these people returned to its ranks, industry will have a better appreciation of the problems of government in the administration of controls.

Scope of the CED

The scope of operations of the Communications Equipment Division is probably somewhat broader than is generally realized. It encompasses not only domestic telephone companies, but also the international communication operators who utilize cable and radio transmission, as well as manufacturers of communications equipment. Both Bell and Independent companies are included. However, the general fields of radio and television, including broadcasters, are not within the scope of the Communications Equipment Division.

Controlled Material Plan

Probably you are more familiar with that function of CED which relates to the allotment of controlled materials than any of its other functions. As you know, the administration of the controlled materials plan involves having manufacturers and operators file applications for controlled materials (copper, steel and aluminum) with CED. It is the function of CED to determine from these applications the requirements of the industry as a whole for the three controlled materials. These requirements, together with sufficient supporting data to indicate the essentiality of the users are presented to DPA. It is the function of DPA to make estimates of the total supply of controlled materials and to relate the supply to the requirements.

By this process DPA comes up with a preliminary recommendation for the allotment of the available supply to the various claimants in accordance with their relative essentiality. These recommendations are then reviewed by a committee composed of representatives of the several claimant agencies and the programs and requirements are adjusted to the supply. Determination can then be made as to the distribution among the claimants.

This is a brief review in a few words of the essential part of the operation of the CMP plan. Actually, the procedures are more complex, but the points which are essential to a general understanding are as I have presented.

The rest of the story you already know. Having received its allotment as the claimant agencies for the communications industry, CED then proceeds to parcel out allotments among the various operators and manufacturers.

Early this year it became evident that the status of CED, as claimant agency for the communications industry, was not well recognized. The division was not represented on the committee handling the program adjustments and this proved detrimental. The matter was pressed actively. As a result the division did obtain recognition as a claimant agency. We considered this most essential to the adequate presentation of the claims of our industry for its essential share of the three controlled materials.

Other Functions—Supply Expediting

Administering the controlled materials plan is, of course, one of the principal functions of the division but there are other important functions with which you probably are not very familiar. One of these is an expediting

J. R. PETERSON

C. W. POTTER

R. F. LUCIER

service for communications equipment manufacturers. The division is frequently called on to assist in obtaining such items of equipment as machine tools. Since the military services have spoken for a large proportion of the machine tool output, the expediting process often requires obtaining clearance for delivery from those services.

In addition, a number of appeals requesting additional supplies of critical non-controlled metals, or relief from restrictions on usage of such critical metals, are being processed. As an example, solders with a high tin content are needed in the manufacture of such items as wave-guides used in microwave radio equipment. Where the use of these solders is prohibited by certain orders, the users can obtain relief by an appeal directed to the CED. There are, of course, many similar actions which require processing.

Conservation Program

A program looking toward conserving scarce metals is a major activity of the division. The interchange of information among the various manufacturers and research laboratories is encouraged to insure general adoption of the latest developments in this field. Some examples of conservation measures which have been widely adopted are:

(1) Substitution of chromium for nickel in stainless steel products such as lashing wire.

(2) Reduction of the nickel content in such piece parts as relay springs and teletypewriter parts.

(3) Substitution of brass parts for nickel-silver parts in telephone switching equipment.

(4) Substitution of steel for aluminum in equipment housings.

(5) Substitution of aluminum for copper in electrical wire and cable.

(6) Substitution of silicon for nickel in magnetic alloys.

In general, manufacturing companies have been most willing to cooperate in conserving scarce metals by substitution. As a result, the quantities saved were very large indeed.

Accelerated Tax Amortization

The government's program for stimulating industrial expansion through tax amortization is probably fairly well known as it relates to basic manufacturers. What I would like to point out is that it is applicable as well to the expansion programs of the communications industry. For example, this summer an expansion goal was set up by the division for the Western Union Telegraph Co. and now has been approved by DPA. That company was thereby granted the right to accelerate amortization of 20 million dollars of a 50 million dollar five-year expansion program. Unquestionably, this will be of great assistance to Western Union in financing the additional plant proposed.

The program can also be applied to telephone operating companies. So far, relatively few applications have been received by the division from telephone operators. However, at least one such application, involving the installation of a complete central office in a housing development adjacent to an army camp, had been approved. Further, several expansion projects of a small operating telephone company were in process of being analyzed and I believe will be recommended to DPA for approval.

Such cases are analyzed by a formula which takes into account such factors as:

(1) The extent to which the project (directly or indirectly) supports a military installation or defense plant.

(2) The difficulty being encountered in financing — especially when the operating company is small in size.

(3) The possibility that the plant installed will have a shorter than normal life.

(4) The likelihood that part or all of the plant installed may become useless in the event of deactivation of the military installation or defense plant which it supported.

These and other pertinent factors are given weight in determining the portion of the total investment to be amortized rather than to determine whether or not tax amortization is to be allowed. Practically any type of telephone plant construction essential to the community being served may be granted some proportion of tax amortization.

The following information on the accounting practice for tax amortization as followed by power utilities was obtained from the Defense Electric Power Administration. It is presented here for illustrative purposes:

(1) The accelerated depreciation rates are not applied to plant for regular accounting purposes with the state commissions, or Federal Power Commission. They are only used for filing returns with the Internal Revenue Bureau.

(2) In the case of regular accounting, the tax savings are credited to a reserve account. The funds accumulated are then used for plant expansion.

(3) At the end of the amortization period, the reserve account will be charged to pay the higher taxes which would prevail (assuming same tax rate and income levels) because no further depreciation can be claimed for tax purposes.

(4) Tax amortization could have an effect on rates only when the percentage of the plant covered becomes relatively large. However, since the tax savings amount to an interest free loan, it will affect the cost of money to the utility and thereby could be a cause for reduction in the rate of return considered equitable by the commission.

Any company wishing further information in relation to the tax amortization program should address its inquiry to the Director of the Communication Equipment Division—NPA.

Future of CED

Now, I would like to say a few words about the future of the Communications Equipment Division, and for that matter of NPA.

As most of you probably know the appropriations for NPA were quite drastically reduced by Congress and the Budget Bureau and substantial personnel reductions are now in progress. By the end of the year, I would expect NPA to be cut by approximately one-half. As the balance between supply and demand for controlled materials improves—and it is improving—I would expect to see the following actions taken in the fairly near future:

(1) The self-authorization limits which apply to the smaller firms will be materially increased, thus reducing the number of applications filed with CED.

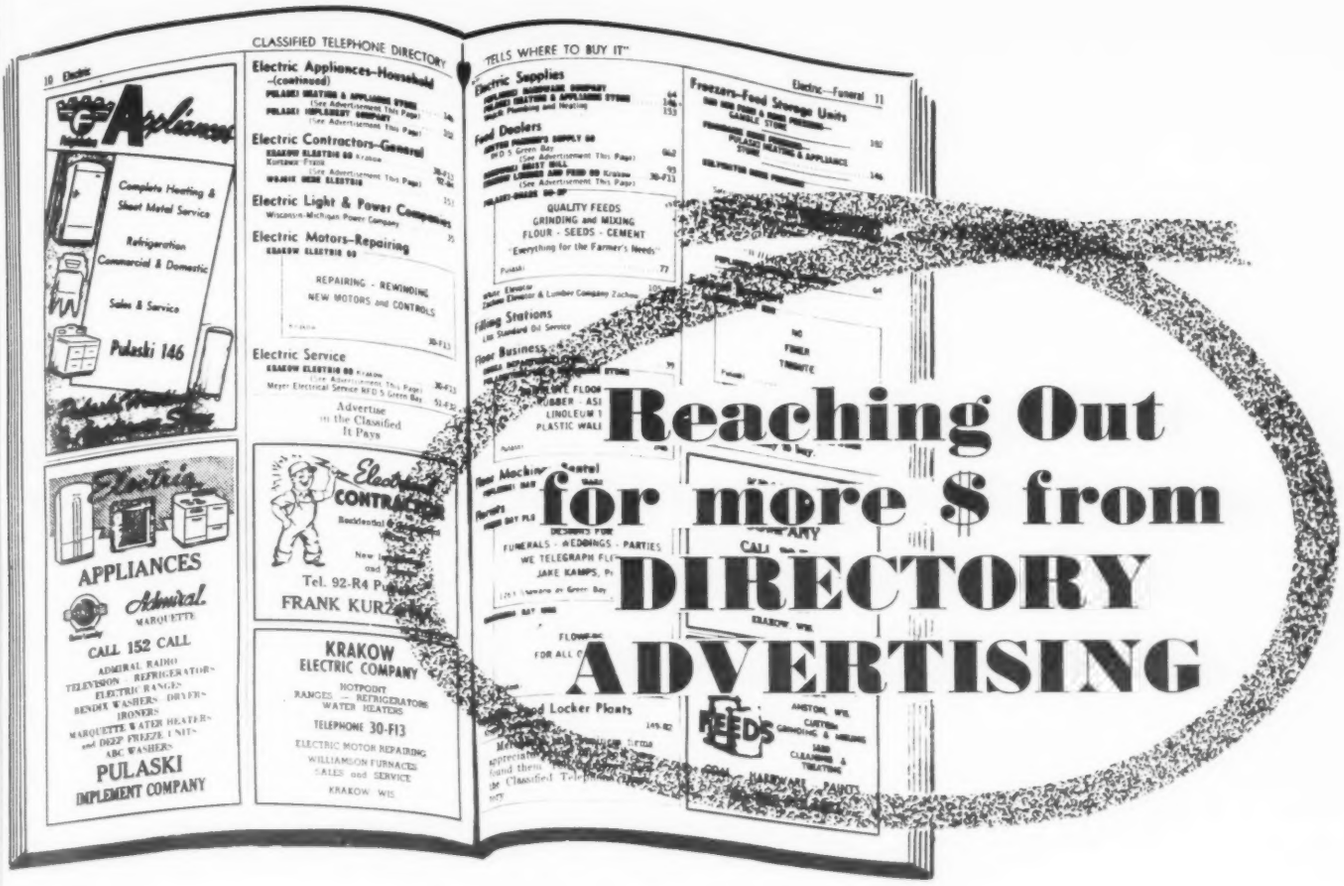
(2) Procedures within CED will be simplified; the applications of smaller companies will be approved more or less automatically and in full.

(3) Full or partial decontrol will finally follow.

With the advent of decontrol, it would, of course, not be necessary for industry to continue the filing of applications for the allotment of materials. Depending upon the trend in international affairs, it is highly possible that some sort of stand-by control organization would be considered advisable. Such an organization consisting of a very small force of key people would provide a skeleton organization on which rapid expansion could be predicated in the event of an all-out emergency at some future date.

Probably instead of processing applications such an agency would receive reports of material usage from the larger industrial firms so that a record of material usage covering perhaps 85 to 90 per cent of industry could be kept on hand. The availability of such usage information would, in the event of a sudden emergency, enable the necessary controls to be re-installed in a very minimum of time—probably in a matter of weeks rather than months. Recommendations relating to such a stand-by operation for the communications industry were prepared by the CED and were informally presented for consideration by the government.

(Please turn to page 32)



Reaching Out for more $ from DIRECTORY ADVERTISING

By C. E. FURROW, Small Company Committee, Iowa Independent Telephone Association

A PROSPECT'S objections to buying directory advertising may be broadly classified into two types.

(1) Real objections, and (2) Excuses, or "put-offs," which are usually devices to get rid of the person talking to him.

Real objections should always be answered in detail at the time they are raised. Unless this is done, the prospect may feel that you are evading them, and the force of everything you say subsequently may be weakened.

When faced with an objection, which you believe to be an excuse, you should assume that up to this point you have failed to stimulate the prospect's want or desire for directory advertising. The technique of answering this type of objection consists, therefore, of disposing of it as quickly as possible, using the answer as a device for returning to the presentation of additional selling points.

Here are some typical objections to buying directory advertising and suggested answers to those objections:

(1) "I don't need to advertise. Everybody knows me."

"Customer generally knows this is not the truth. With.....new customers in the city I am certain many of these potential buyers of your product could not know of everything you handle and are you sure they will think of you when they are ready to buy? Many other firms handle similar lines and if your name is not before them when they are ready to buy you may not receive their business."

* * *

(2) "I use the newspaper (radio, etc.) so I can reach more people, more often."

"Both are excellent advertising mediums, and telephone directory advertising ties in with both of them. It is necessary for people to look up your telephone number after being influenced by these forms of advertising. If you don't have a convincing tie-in, your customers may be influenced by some other firm's message in the directory and secure business that is rightfully yours. Telephone directory advertising is a good insurance on your other advertising. When they look in the directory they are ready to buy."

* * *

(3) "I can't afford any more advertising."

"Affording is a matter of what and how much you can get for your money. Directory advertising covers your entire market. In general, telephone customers have more money to spend than non-telephone customers. Directory advertising brings you business, therefore, is not an expense, but a method of making more profit."

* * *

(4) "The directory doesn't reach the people I want to do business with."

"It reaches most of the people within a radius of....miles. Many of your customers are in this territory. The

***PART III.** In the first (Nov. 15 issue) and second (Nov. 22 issue) installments of this article, Mr. Furrow discussed the advantages and types of directory advertising and preparing oneself for selling the advertising. In this article he tells how to meet advertisers' possible objections to directory advertising.*

right kind of a message in the directory will bring you new customers and more profit. Most advertising has some waste, the directory has very little and is on the job 24 hours per day."

* * *

(5) "I'm losing money, so I've got to cancel my ad."

"Has something happened in your business lately? (Always inquire before you attack.) What has brought about this change from last issue?"

* * *

(6) "I don't like the position you gave my ad last issue."

Determine his reasons, attempt to pick out good points of his location, also show him the copy and explain it might be copy instead of position that does not do the job. Justify the location. Also explain how the directory is paged and the benefits derived from our method.

* * *

(7) "I'm moving to a new location, but not until *after* the new directory comes out, and I don't want to advertise the wrong address."

In display ads show this new location after date. If he is moving, does not know his address, then bring out his name. All the more reason why one should advertise or continue to advertise especially if some changes are taking place. If there is no change in telephone number, the telephone calling will not be affected. Many people may know he has moved and call him for his new location, thus increasing his directory advertising needs. He cannot afford to be out of the directory. Some customers may think he has gone out of business.

* * *

(8) "I never use the directory and doubt if anyone else does."

"You may know where to trade but hundreds do not, especially those not having business connections as you."

* * *

(9) "No one uses the directory except to refer to the listing columns—no one looks at the display ads."

If customers use listing column matter, the display will be seen. Cuts are used in display to better tell their story. Larger type and more space permit an advantage.

* * *

(10) "I may sell out my business before long."

"Your successor will want advertising and to sell a going business is easier. If it has been a good investment for you, it certainly will for your successor."

* * *

(11) "The directory gets out of date too soon."

"This medium ties in with other types of advertising. We maintain a mortality study of our listings and our book becomes only 25 per cent out of date. The telephone directory is one of the only permanent guides in this city. All of these changes are within your trade territory and that is all the more reason why your message should be in the directory. New customers make a profitable business."

* * *

(12) "I neglected to put any money for the directory into my advertising budget."

Look upon listings and advertising as a service instead of the work advertising. Probably budget should include telephone directory advertising. Many of these objections are somewhat false as most firms do not use a budget. Budget can generally be extended to include some important items.

* * *

(13) "All my customers know my telephone number. They have it written in note books, on business cards, on the wall, etc."

Recognize this point. Point out these items are quite often lost. By putting a card in the telephone book, it is never lost. The directory is on the job 24 hours a day, and reaches not only those who are present customers, but all potential customers.

* * *

(14) "I didn't expect you and there isn't time to get an ad ready."

Somewhat false objection. This will only take a few minutes. Offer assistance in preparing ad.

* * *

(15) "I have to get authorization from the home office and there isn't time."

Offer to help write a letter, or place a long distance call, to the home office. This will stimulate the use of directory advertising. Try and determine if this man is not sold on it. Be sure it is not a "put-off."

* * *

(16) "The directory is so full of display ads now, I can't find anything."

Present a layout for his business. Other advertisers must see some value or they wouldn't use it. The right layout and message can get him business the same as is being done for the other advertisers.

* * *

(17) "I've got more business now than I can handle."

Recognize this, however, point out that business is constantly changing. Most every firm wants more business. He may have enough business today, but time may come when he will need more. Better for him to get more calls and turn some down than to get just a few.

* * *

(18) "All my business comes by recommendation."

False. Recognize this and use the following: "The customer may not remember and will have to go to the directory to call you or locate your address. If you are not listed you may lose many calls. Make it easy for the customer to find you. It is a tie-in to a good recommendation."

* * *

(19) "I'll have to talk to my partner."

Ask to talk to partner. Ask this man if he can handle it. Call back when partner is in, or try and get them together.

* * *

(20) "I don't need any directory advertising. Our salesmen are calling on our customers all the time."

"When customers are ready to buy they refer to the directory. Your advertising will tie in with your salesmen's story and be more convincing. One never can tell when they are ready to buy. The directory is available at all times and is never thrown away. Literature is not kept too long, or is mislaid."

* * *

(21) "I would rather invest in better equipment than in more advertising."

"Better equipment would hold your present customers, but you must reach out for new customers, present your firm name and products to such an extent that new customers will be attracted to your firm's old satisfied customers and later recommend your firm to many new potential customers—your advertising should be of such a nature to feature your services and products to verify and back up these recommendations."

(Please turn to page 34)

THE PLANT MAN'S Notebook

by Ray Blain, Technical Editor

WE ARE IN receipt of a report of low resistance trouble in an 1,800-pair cable that had to be opened and dried out. This trouble was first noticed on teletypewriter circuits, routed through the cable, burning down to ground.

A splicer worked on the splice in this particular manhole for several weeks and during this time moisture collected and was closed up in the sleeve. Unfortunately, splicers do not, in every case, work the desiccant through the conductors evenly and thoroughly so that it can absorb any moisture that has accumulated during the time the splice is open. Our reporter states that some splicers seem to think that if they merely wave a can of desiccant at a splice, it will absorb all moisture.

• • •

It is claimed that the manufacturer labeled the box "Colored Pencils," but if the Army wants to buy some, its order must read: "Pencil, wood-cased, lead, colored lead, drawing, thin diameter, assorted, 24 to the box."

• • •

It has been said that experience is one thing you can't get on the easy payment plan.

• • •

It is surprising to note the good telephone service furnished by some of the old tripod lines in Alaska.

These old lines have been in service for many years, and strange as it may seem, they do not require excessive maintenance.

The tripod fixtures consist of three light-weight poles wired together at the top and the butts anchored by setting only a few inches in the earth. The fixtures are not climbed, but one leg of the tripod is pulled out and the top lowered so that the wires can be worked on by a man standing on the ground.

We were not able to learn how the wire tie is made that holds the top of the poles together at the top to permit this hinge action, but it is a clever arrangement.

The wood brackets supporting the wires are nailed to one of the poles of the tripod near the top.

Four wires represented the heaviest line we saw using the tripod type of construction.

• • •

The lack of proper planning must result in a considerable item of expense for some operating telephone companies.

This was brought to our attention only recently when we noted a job where a pole line had been moved on account of a street widening project. The poles were set on the new location in a concrete sidewalk.

Then, in about a month, because of a need for increased facilities, it was necessary to replace some of the recently moved poles. The new sidewalk was cut out with an air hammer, new poles set, and a new section of sidewalk poured. It would certainly appear that forecast studies and proper planning could have prevented this additional expense.

"I'm going to slip this phony beard on—it will give this gal an idea of how long I've been waiting!"

• • •

A modern Robin Hood has been defined as someone who steals from the rich to pay his income tax.

• • •

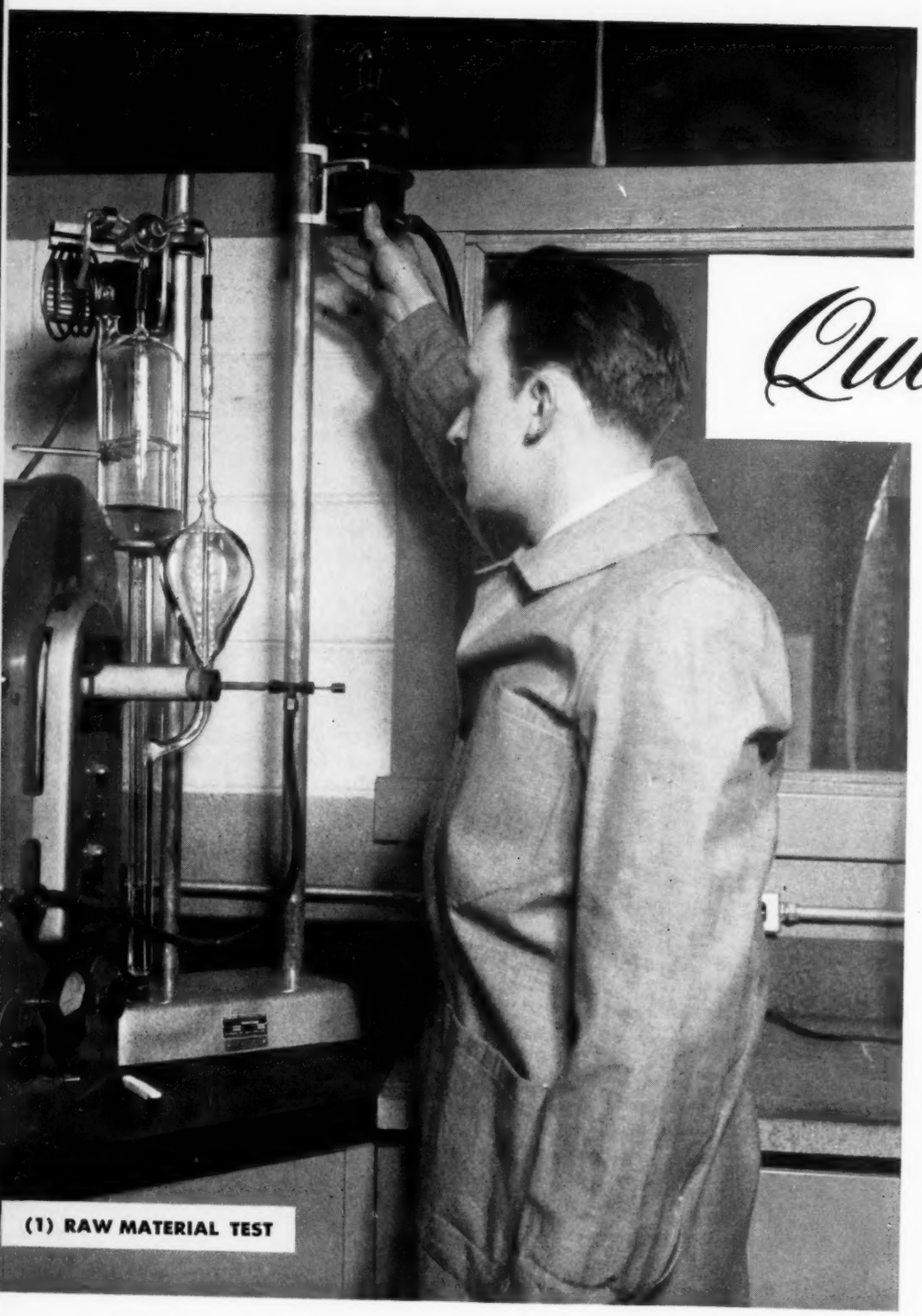
The "Battle of the Buzzards" is raging down in Georgia. The AT&T company installed a 150-foot tower on the Washington-Atlanta radio relay route on Suwanee Mountain, some 50 miles from Atlanta.

This tower has become the most popular buzzard roost east of the Mississippi River. In fact, the birds will not get off the tower, but keep it covered like a blanket.

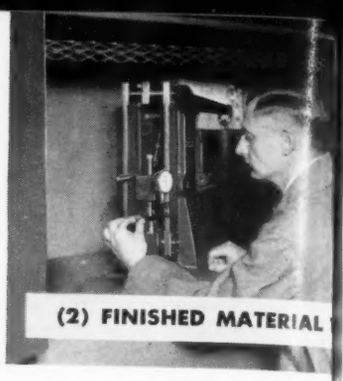
Scare-crows were first tried, but they had no effect on the birds. Then it was decided that noise would keep the birds away, so a chain was arranged to be whirled by a motor to strike against a section of metal in such a manner as to make a terrific noise. This noise was repeated every half hour and lasted about a minute. It is claimed that the buzzards loved this noise and waited around in droves to hear the music.

Then a secret weapon known as a "gigger" was designed with the hope that it would do the trick. This was a counter-balanced roost and a nest of "gigs" pivoted on one end of a shaft which has a hammer head on the opposite end. The object of this device was to impress the bird with a sharp "gig" that he was not welcome. Although Joe Buzzard was "gigged" aplenty, it did not deter him for he came back to his favorite roost.

To date, no successful method of discouraging the buzzards from roosting on this tower has been discovered.



(1) RAW MATERIAL TEST



(2) FINISHED MATERIAL

Quality Co

(3) PIECE PART TEST

(4) ASSEMBLED PART TEST

(5) FINISHED PRODUCT

trol—another sound reason for buying from Automatic

If we could use only *one* word to tell you why it pays to buy from us,
that word would be *"Quality."*
For customers' records prove
that the quality we build into our products
gives you the utmost in performance and dependability!

This quality is no haphazard matter with us.
We keep it uniform by making constant "Quality Control" tests
for which we set rigid standards—even develop special testing devices!
In the pictures at the left, for instance:

(1) Analysis of iron determines its suitability for magnetic cores —a "must" in dependable relay operation.

(2) Cold deformation check on phenolic fiber guarantees long life for Strowger banks.

(3) Piece-part gauging guards accuracy of Type 51 Dials.

(4) Receiver capsule check assures fidelity of reception.

(5) Final inspection of completed toll ticketing train makes sure of flawless performance in the field.

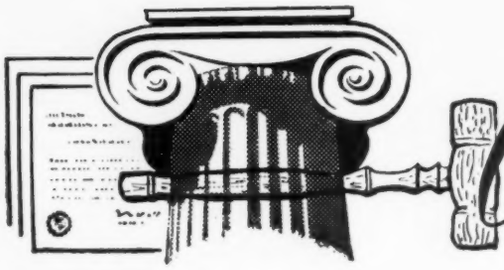
So it is with all our products;
from raw materials to final inspection,
Quality Control safeguards your investment!

Keep our Quality Control in mind when *you* order equipment
—it's another sound reason for buying from Automatic!

AUTOMATIC AE CD® ELECTRIC

Originators and Developers of the Strowger Step-by-Step "Director" for Register-Sender-Translator Operation . . . Machine Switching Automatic Dial Systems
Makers of Telephone, Signaling and Communication Apparatus . . . Electrical Engineers, Designers and Consultants

Distributors in U. S. and Possessions: Automatic Electric Sales Corporation
Export Distributors: International Automatic Electric Corporation
1033 West Van Buren Street, Chicago 7, U. S. A.



Courts and Commissions

Northwestern Bell Enters New Rate Plea in Nebraska

Northwestern Bell Telephone Co. on Nov. 17 filed a new application for increased rates with the Nebraska Railway Commission (TELEPHONY, Nov. 15, p. 37).

In commenting on the filing, L. O. Arstad, general manager, said, "The commission's recent dismissal of our previous application noted that present rates had not been in effect a reasonable period of time. It also indicated that the company should have filed a proposed schedule of rates.

"Present rates were based on a test period ending Sept. 30, 1951. Well over a year has now elapsed since then. Our new application spells out specific schedules of proposed rates which would produce increased monthly revenues of $139,300, or $64,500 per month of net earnings after taxes."

Mr. Arstad stated, "We feel that the new application corrects those things of which the commission was critical in its dismissal order. Under these circumstances we see no reason why this application would not be acceptable to the commission. We are hopeful that the commission now will order a hearing at an early date."

"The cost of furnishing telephone service has increased substantially," said Mr. Arstad. "Present rates are based on the much lower costs which prevailed over a year ago. Wage increases for the company's employes, effective in August of this year, plus other higher costs, make it necessary that rate relief be obtained as promptly as possible.

"Every month demonstrates more clearly that revenues from present rates are falling farther short of what is needed to provide adequate earnings on the property used to furnish telephone service in Nebraska."

The filing was the latest step in the company's efforts to obtain an increase in revenues. The company filed an application on Aug. 13. On Oct. 14, the commission dismissed the application without a hearing. On Oct. 20 the company filed notice of appeal to the state supreme court from the commission's dismissal order and on the same day filed with the commission an application for temporary rates. These actions are still pending.

V V

New Hampshire Rates Frozen, Company Appeals to High Court

The New Hampshire Supreme Court on Nov. 14 suspended an order of the New Hampshire Public Utilities Commission which set new rates for the New England Telephone & Telegraph Co. and which ordered the company to refund about $580,000 to its customers collected in so-called excessive rates since last April (TELEPHONY, Nov. 1, p. 23).

The present rates will remain in force while the company's appeal to the high court against the commission's decision is heard by the top tribunal. The new rates specified by the commission were never placed in effect because the commission suspended its finding while the company prepared to appeal to the supreme court.

The supreme court suspended the commission's order "upon condition that the company forthwith file with this court its undertaking for the prompt repayment of all excess rates over and above the rates finally determined to be reasonable and just, and upon the further condition that the company keep such accounts as shall suffice to show the amount which it hereafter collects in excess of the amount which it would have collected in the absence of such suspension. Such accounts are to be open to inspection by or on behalf of the public utilities commission." A final decision of the court is expected by late winter.

V V

Ind. Company Seeks Stock O.K.

Authority to issue $125,000 in preferred stock to finance improvements was sought by the Batesville (Ind.) Telephone Co. in a petition filed recently with the Indiana Public Service Commission.

V V

General of Ind. Granted Raise

General Telephone Co. of Indiana, with headquarters at Lafayette, recently received approval from the Indiana Public Service Commission to increase local rates, effective immediately, to provide $906,519 additional gross revenue per year, increasing its earnings to approximately a 6 per cent return on its investment.

V V

Rate Increase Granted To Chester, S. C., Company

The South Carolina Public Service Commission has granted a rate increase to Chester Telephone Co. (TELEPHONY, Nov. 22, p. 40).

New rates are expected to increase annual revenues by $34,000 and to raise the company's rate of return from 4.06 per cent to 6.07 per cent. The company has proposed to convert the present manual exchange at Chester to dial and to construct other facilities which would furnish service to unfilled applications.

The company testified at the hearings that it needs additional revenue to place it in a financial position to obtain additional capital to make necessary improvements.

V V

Nebraska Farmers Company Gets First Increase Since 1916

Rate increases of $1.25 per month on all classes of service were granted the Farmers Telephone Co., Taylor, by the Nebraska Railway Commission on Nov. 6 (TELEPHONY, Sept. 13, p. 29). New rates were to become effective on metallic lines on Dec. 1 and on other lines as they are made metallic.

The following rates are net as the company does not use a discount plan:

	Present	*Proposed*
One-party business*	$1.75	$3.00
One-party business†	1.50	2.75
One-party residence*	1.25	2.50
One-party residence†	1.00	2.25
Rural*	1.25	2.50
Rural†	1.00	2.25
Service station	None	1.00

*Company-owned
†Subscriber-owned

This was the company's first rate increase since 1916. Nevertheless, several persons protested the application but only two testified in opposition at the Oct. 16 hearing. One of these said

he would pay the increase if his line was made metallic. The company said increases were necessary because of increased maintenance expense and higher wages.

New rates will produce $177.50 per month additional revenue. The company serves 82 urban and 60 rural subscribers.

V V

Call Indicator Service Petition Dismissed by FCC

The Federal Communications Commission on Nov. 5 dismissed a petition to reconsider a complaint filed by Harry R. Booth, formerly a legal staff member of the FCC and the OPA. Also filed by Milton Booth and Walter S. Berkman, an attorney and part owner of a patent for a signalling device, the complaint asked the FCC to require the Bell System to make "call-waiting indicator" service available.

The complaint was originally filed in July, 1948, against the American Telephone & Telegraph Co., Illinois Bell Telephone Co. and Southwestern Bell Telephone Co. It was dismissed in March, 1949. Because of the complainants' failure at that time to submit additional information substantiating allegation of public need and demand for this type of service and technical information demonstrating the feasibility of the device, the recent action was taken.

The FCC remarked that it is unquestionably the duty of the defendants under the Communications Act to furnish adequate and efficient telephone service upon reasonable request; but, it also pointed out:

"There is nothing in the complaint, or for that matter, any other reasonable basis of which we are aware which would support a conclusion that defendant's service, by virtue of the failure to include call-waiting indicator service is so inadequate and inefficient as to constitute a failure of defendants to comply with their statutory duty to furnish telephone service upon reasonable request therefore."

V V

General of Southwest Sells Bonds, Secures Rate Raise

General Telephone Co. of the Southwest, Dallas, Tex., operating in Texas, Louisiana, Oklahoma, New Mexico and Arkansas, announced on Nov. 20, through its president, Roy Autry, that the company had sold 2 million dollars in new bonds to three insurance companies.

The new bonds will provide, in part, the cash required to complete the company's 1952 construction program.

On Nov. 21 the company announced that it had received approval from the Oklahoma Corporation Commission to increase its telephone rates in Oklahoma by $111,000 per year, effective immediately.

The General company of the Southwest serves 130,000 telephones in its five-state territory. The increased rates granted in Oklahoma are to recover recent wage increases and advances in material costs.

V V

Indiana Commission Split on "Detchon Sale" to Co-op

The Indiana Public Service Commission is reported to be split wide open in facing a decision whether to grant control of a group of Independent telephone companies to an REA-financed cooperative or to Indiana Bell Telephone Co. The commission has ended hearings on the co-op's petition to purchase the properties.

The Independent companies involved are 13 included in the estate of John T. Detchon, commonly referred to as the "west side" group of the companies owned by the late Mr. Detchon (TELEPHONY, Oct. 11, p. 32).

Indiana Bell recently purchased seven other Detchon properties, designated as the "east side" companies.

It is understood that Indiana Bell has extended an offer to purchase the "west side" properties, even though it has not filed a petition for territorial authority with the commission.

Thus it has become a question of "taxpayer-financing versus free enterprise" and has touched off a tug-of-war within the commission, it is said.

With Hugh W. Abbett, commission chairman and a Democrat, in favor of the cooperative and Wallace Weatherholt, the lone Republican member, against the co-op, the balance of power lay in the vote of the other Democratic member, Wendell E. Tennis. Tennis was reported to be "on the fence."

The final hearing on the co-op petition on Nov. 19 was devoted to oral arguments on briefs filed by Harvey B. Hartsock, attorney for the Hoosier cooperative, and Claude M. Warren, counsel for the intervening United Telephone Co., Warsaw.

Warren contended the cooperative is not properly organized under Indiana law, and attacked its financing plan.

The Hoosier cooperative has had $6,800,000 in Rural Electrification Administration funds earmarked for acquisition of the 13 properties and for their improvement. It also has obtained another $286,000 from REA electric co-ops in 10 Indiana counties.

Warren deplored what he called a lack of equity capital in the enterprise and said such a financial set-up never has won commission approval in the past.

Hartsock argued that the cooperative is properly set up under the 1935 Indiana Not-for-Profit Act, and said that the federal government is merely serving as a banker by lending money and would not be the owner of the cooperative.

He said Indiana Bell had had an opportunity to bid on the 13 "west side" properties but did not do so.

V V

S. C. REA Co-op Seeks Higher Dial Rates

An official of West Carolina Rural Telephone Co-operative, Inc., testified on Nov. 18 before the South Carolina Public Service Commission that the cooperative plans to convert the present Starr and Iva magneto system to dial operation.

Louis Thompson, manager of the co-op, told the commission that it wants a rate increase after the new system is operating.

The hike would range from a minimum of $3.75 for multi-party residential service to a maximum of $6.75 for one-party business service, to supplant the present straight $3.50 for business and $2.50 for residential service.

The co-op recently took over the Starr-Iva Telephone Co., headed by Mr. Thompson.

The commission took the rate increase petition under advisement.

V V

Two Small Kansas Companies Get Rate Increases

Two Kansas telephone companies were granted rate hikes on Nov. 19 by the Kansas Corporation Commission.

Approved was a $1,072-a-year increase for the Belmont Telephone Co., serving 93 customers, and a $440.40 annual hike for the Carlton Telephone Co., serving 90 customers.

V V

Wis. Independent Asks Increase

Wisconsin Public Service Commission on Nov. 26 was to have heard the application of Sullivan Telephone Co. for authority to increase rates.

V V

>> About 65 per cent of the households in the United States had telephone service at the start of 1952, an increase of 18 per cent since the end of World War II.

OPERATORS AND CO-OPERATORS

When customers are co-operators, Long Distance operators can give them faster service. Our current magazine advertisement, on the facing page, should be helpful to those who use and those who give Long Distance service everywhere.

When you're calling out-of-town

It's faster to Call by Number

You save time when you give the Long Distance Operator the out-of-town number you're calling. Your local Bell Telephone Company will be glad to give you a handy booklet for listing your telephone numbers.

Helpful Hint. *Write down the local and out-of-town numbers you already know. If there's a new number you don't have—or an old one you've forgotten—be sure to add it to the list when the operator gives it to you.*

LOCAL . . . *to serve each community*
NATIONWIDE . . . *to serve the Nation*

BELL TELEPHONE SYSTEM

General Telephone System Serves 1½ Million Telephones

One and one-half million telephones are now served by the General Telephone System; that is the total reached on Nov. 20 when a telephone was installed at the home of Mr. & Mrs. Carl Melchin in Kewanee, Ill., by the General Telephone System's subsidiary operating company, General Telephone Co. of Illinois.

This milestone reached by the General Telephone System is a net gain of better than 100 per cent since December, 1945; at the close of World War II, the system had less than 700,000 telephones.

General Telephone System traces its history back to 1920 when there were about 1,544 telephones in service in five small Wisconsin communities. Fittingly enough, the one millionth system telephone was installed at Richland Center, Wis., in May, 1948.

At the end of 1935, the General Telephone System included 13 operating companies with a total of 380,000 telephones and one directory publishing company. Today these 14 subsidiary operating companies are serving 1½ million telephones; in addition to a greatly expanded directory company, a manufacturing subsidiary, the Leich Electric Co., has been added to the system.

General Telephone Co. of Illinois, where the historic installation of the 1½ millionth telephone took place, is one of the major subsidiary operating companies within the General Telephone System. Headed by Burton W. Saunders as president, the company has headquarters at Springfield, Ill. At present General Telephone Co. of Illinois is furnishing service to more than 160,000 telephones in 222 exchanges, the largest of which are Kewanee, Lincoln, Macomb, Monmouth and Carbondale.

The General Telephone System is the largest Independent (non-Bell) telephone organization in the United States. Its 1,500,000 telephones are served from 1,065 exchanges in 19 states.

V V

Foresees Fire Extinguishing Done By High Frequency Sound

Fire extinguishing in the future may be accomplished by means of sound waves, according to John A. Neale, chief engineer of the National Board of Fire Underwriters (NBFU).

Mr. Neale reports that fire protection engineers have known for many years that under certain conditions flame can be extinguished by sound waves and that it is not "too far-fetched to surmise that current developments with high-powered sound and vibrations above audible range may lead to investigation of fire extinguishment by that means."

This was reported recently by the National Board of Fire Underwriters in its clip sheet "Facts About Holiday Fire Hazards," sent to the editors of the nation's press.

The board's report also stated that fire losses in the United States for the current year (1952) may total some 770 million dollars, 6 per cent above last year's total of $730,084,000.

The fact sheet pointed out that fire losses increase substantially during the winter months.

According to the NBFU, fire losses for the months of December (1951) through March (1952) amounted to $284,540,000, an increase of 3 per cent over losses of $276,149,000 reported for the corresponding months of the year before, and an increase of 10.8 per cent over losses of $256,910,000 for a like period two years ago.

Faulty stoves, furnaces, and boilers account for a major portion of all fires during the winter months. Other causes are over-heated or defective chimneys and flues, hot ashes and coals (including open fires), and sparks on roofs. Such hazards are in addition to the ever-present ones of matches-smoking and misuse of electricity that account for nearly 40 per cent of all fires every year.

The NBFU also warned that the Christmas tree, center of holiday festivities in most American homes, can easily become the center of tragedy.

Because the fir tree is filled with pitch and resin, it is one of the most combustible objects known—and once ignited, it burns so rapidly that it is virtually impossible to extinguish.

In addition to the clip sheet, NBFU's bi-monthly four-page publication, "Facts & Trends," emphasizes these hazards in its lead story, and in other articles discusses, for example the possibility of fire extinguishing by means of sound waves.

"Facts & Trends" also discusses the fact that at least 600—possibly 1,000 or more — children between the ages of 5 and 14 die every year as a result of fire that claims a total of 11,000 persons.

The NBFU also has made available two feature stories. One is on how to make a home "fire-safe" and the other tells how to minimize the dangers of Christmas fire hazards.

All material will be sent free upon request. Address: National Board of Fire Underwriters, 85 John St., New York 38, N. Y.

Artificial Respiration Teaching Aid Offered by Council

The National Safety Council's new safetygraph "Two Methods of Artificial Respiration" provides a ready aid in teaching small groups the "arm-lift back-pressure" and the "hip-lift back-pressure" methods of artificial respiration.

Although these two methods of reviving drowning and electrical shock victims have proved more effective than the widely-used Schaefer system, few workers have been instructed in their use.

The council's new visual aid provides a ready means of training small groups in the back-pressure methods. Consisting of 12 spiral bound pages—18 inches by 24 inches—inserted in a brown leatherette portfolio, the safetygraph can be set on any flat surface and opened to form an easel.

On the pages facing the audience are clear and accurate drawings of the various steps in both the arm-lift and hip-lift methods. The explanation of each step is printed on the back pages in large type which can be read easily by the instructor. Both notes and visual aids are provided in one ready-to-use package. An added feature is a complete discussion of the problem of changing operators during the resuscitation cycle.

Information as to prices may be obtained by writing the National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill. The safetygraph will be sent on approval for a five-day free examination.

V V

S. C. Co-op to Expand

R. D. Guerry, manager of the Farmers' Telephone Co-operative, Kingstree, S. C., recently said that plans are being completed to extend a network of telephone lines to cover Williamsburg, Clarendon and a part of Florence counties. Exchanges already set up at Maysville, Greeleyville and Pinewood will be expanded, he stated.

V V

"The challenge to American business is clear and all important to the future of our country. Can we assume a conscious and vigorous leadership based upon the highest principles which should govern human relations? Unless we can, and do, assume this leadership, it will be taken over by those who will take us down the road to complete statism and inevitable collapse."—BEN MOREELL, *Chairman of the Board, Jones & Laughlin Steel Corporation.*

We Brought TV to Our Town

(Continued from page 16)

At this point, financing the large program of transporting this signal the 2.9 miles to the village of Walton and covering the 55,000 feet of village streets so that all residents of the village could be served, was undertaken. Booster boxes had to be mounted on poles every 2,500 feet, and automatic gain controls, which would keep the picture within 10 per cent of its normal level regardless of airplanes, storms, a decrease in station signal, etc., had to be installed every four booster boxes. The automatic gain controls are considered a very vital part of the television system. Coaxial cable, known as RG 11 U is used as the main feeder cable which covers the entire system and smaller cable, RG 59 U, is run parallel to the larger cable as a feeder cable in the village of Walton. The main cable runs directly from booster to booster, and where subscriber television service is desired on the smaller cable, an ADO box is installed in the same cabinet with the amplifier and the smaller cables attached. On the hill run, one-quarter inch strand was used. Sections were approximately 300 feet apart. In the village a three-sixteenth strand was used, with pole spans approximately 150 feet apart. We found that cable spinning machines worked satisfactorily on both sizes of strand. The cable was installed on poles owned by the local telephone and electric companies, the rental fee for which will be discussed later on.

The Community Antenna System has a cable plant which is second to none, and is run in strict accordance with the best telephone specifications for line construction. No expense was spared in the construction of the plant which we believe will pay big dividends in the future.

Preventive maintenance, which is important to any utility company, is much more vital to an antenna company. All electrical equipment in the system must be thoroughly checked and level inputs and outputs recorded each month. As the television signal leaves a booster and an amplifier station, it is approximately 100,000 micro-volts. If this reading varies more than 10 per cent, it indicates that the amplifying equipment may be going soft and it should be replaced immediately.

Splicing in an antenna system is of vital importance, and a loose connection in any one of the many amplifying stations or ADO boxes can cause the television picture to jump, snap and twist as no contortionist ever thought of doing.

This article is rather difficult to write, as the author is, in addition to being a co-owner of the Community Antenna System, manager of the Delaware Telephone Co., Inc., which serves Walton. Incidentally, my mother is president of the telephone company. It was felt from the beginning that a very strict separation would have to be maintained between the Delaware Telephone Co., Inc., and the Community Antenna System, and that theory has been carried out to the letter.

EDWIN MILLER is shown tapping the coaxial cable to .080 wire for support.

Telephone company construction crews, which have done quite a bit of the work for the antenna system, were hired on an off-time basis; the telephone company was paid for all trucks that were used; and material which was purchased from the Delaware Telephone Co., Inc., was paid for at a premium price.

Permission was obtained from both the telephone company and the electric company for contacts on poles owned by those companies and poles that are jointly used by the telephone company and the electric company.

The telephone company pays a rental of $1.00 a year to the electric company for each contact on solely-owned electric poles, so it was considered just by the Community Antenna System that it should pay the telephone company 50 cents a year rental per contact on any and all poles that it shares, in which the telephone company had an interest or on which it was paying rental. The telephone company also regarded this as an equitable arrangement. This means, of course, that the telephone company will recover one half of its annual rental bill.

Cooperation between the Community Antenna System and the electric company has been excellent from the beginning, because the antenna company has never tried to undersell the electric company; it was straightforward in presenting its program; and it changed many of its plans at the suggestion of the electric company.

The telephone company and the electric company have, by permitting the antenna company to attach to their poles, given the residents of the village of Walton another service, and both have received additional income.

The telephone company was assured that all of its construction specifications would be met, and that any changes that the telephone company requested, at any time, concerning line construction would be made. The telephone company was further assured of these facts as its own crews were doing the work during weekends and evenings. The telephone company appreciated this arrangement because its plant men were more than happy to receive the work to help boost their income.

As can be seen, a tremendous amount of capital is invested in the antenna system. Consequently, the antenna company found it necessary to charge television subscribers an installation charge of $150 for residence service, and a $3.00-a-month service charge; $175 for commercial or business installations, and a $4.00-a-month service charge (these rates are average for antenna systems). This charge may appear high to people to whom television signals are available for the asking, but they must realize that in the village of Walton an outlay of $90 for boosters and antennas will bring a poor picture on only one channel, compared to the $150 charge of the antenna system which will bring three snow-free television channels at the present time, and perhaps more in the future.

Contractors strung the cable throughout the village and two men have been hired and equipped with trucks to make the television subscriber installations. The people were very skeptical as to whether or not three television pictures could be transported through the same cable, mixed, unmixed, amplified, etc., and be worthwhile pictures in the village of Walton. But once the pictures were received and placed on display, there was a great demand for home television hook-ups. It is estimated that 45 per cent of the homes in Walton will receive television through the Community Antenna Sys-

tem. Walton has approximately 1,400 homes.

The idea of piping television to Walton has indeed progressed rapidly, even though many drastic changes were made in the original plans, and today the Community Antenna System is a highly successful concern.

The net result of our efforts is that the residents of the village of Walton now have available to them three television channels for their enjoyment.

Functions of the CED of the NPA

(Continued from page 20)

Industry Evaluation Board

I would like to refer at this point to the work now being done by the Industry Evaluation Board. The board is currently studying the major essential industries of the country with respect to the development of over-all criteria for post-attack rehabilitation.

Each major essential industry is being reviewed individually. The major industrial facilities are considered in their relation to defense problems and the necessary ground rules covering the restoration of essential services and critical manufacturing facilities are being worked out. The CED has had a representative assigned to a task force of the board and has cooperated actively in the work. The board is now actively reviewing the communications services of the nation.

Administration of Communications Order

As you know, the controls applicable to the communications industry are spelled out in NPA Order M-77 entitled, "Communications." The drafting of this order was accomplished by men from industry and government working together during the period when the Controlled Materials Plan was being formulated.

The division is responsible for administering the order. It receives and acts on appeals filed by communication companies pursuant to the order and the law, and grants or denies exceptions to its provision. It constantly studies current trends and reviews policy changes promulgated by the NPA to assess their effect on the communications industry. As revisions in the order became necessary, it prepares and issues such revisions.

Recently, work was undertaken on a broad revision of the order aimed at relaxing its provisions quite materially principally by increasing the limits of self-authorization. It may be anticipated that this revision will be issued soon to be effective about Mar. 1, 1953. I think it would have been in effect by Jan. 1 had the recent steel strike not occurred to disrupt the production of the steel mills.

Industry Advisory Committee

In order to insure participation of industry in the NPA program, as well as to gain the benefit of the advice of leaders of industry, a large number of Industry Advisory Committees have been established. Each industry division in the NPA has one or more of these committees. The Communications Equipment Division has three such committees representing, respectively, the domestic communication operating companies, the equipment manufacturers, and the international communications operators. Each of these committees is composed of key men chosen so as to represent the smaller as well as the larger companies and drawn from various geographic areas.

These committees meet when invited to do so by the division director—not necessarily at regular intervals, but rather when their advice is needed in drafting new orders or regulations, or to assist in interpreting either the needs of the industry to the government or the policies of the government to the industry. The committees also furnish task groups when required to work on specific problems. The meetings are presided over by the division director, and are formal, with a representative of the office of general counsel of NPA in attendance.

Men from Industry in Division

I would like to say a few words in appreciation of the men from our industry who have served as directors and deputy directors of the division since its organization. These men left their affairs and their homes to devote their talents to the betterment of their industry and their government. Each was on loan to the government for a six-month tour, and each in his own way contributed greatly to the difficult task of administering the work of the division.

Without their service, our industry would most certainly not have received its due recognition as an essential support to the defense program. Those who served as director are Luther W. Hill, Tarboro, N. C., president of Carolina Telephone & Telegraph Co.; Robert E. Williams, Chicago, Ill., an official of Automatic Electric Co., and William M. Day, Detroit, Mich., vice president and general manager of Michigan Bell Telephone Co. My six-month tour of duty ended on Aug. 30.

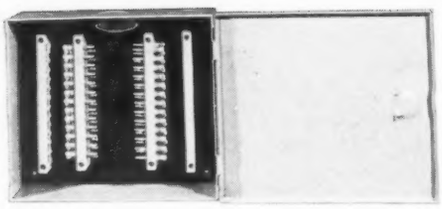
Industry representatives who have served as deputy director are Warren H. Chase, Cleveland, Ohio, assistant vice president of Ohio Bell Telephone Co., and J. R. Peterson, St. Louis, Mo.,

Constructio
With the Doub
and Americ
individual station
protector
reliable 955A

MFD. BY RELIABLE ELECTRIC COMP
• One-piece Design
• Simplified Mounting
• Asbestos Mats Eliminated
The very simplicity of the Relia 955A is assurance of long, trou free service. Fuses are moun on a one-piece, low absorp porcelain, well spaced for c venient connecting. Reliable S cleaning Sawtooth Dischar Blocks are standard, dissipat static without time lag or dan of grounding the line. The 95 uses No. 77L, seven ampe ceramic fuses.
"Reliable Identifies the Quality"
STROMBERG Telephone CARLSON
TELEPHONES, SWITCHBOARDS • SO

...aterials and Supplies...

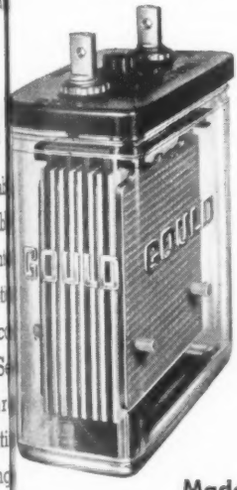
...arantee of Stromberg-Carlson ...ading Manufacturers...



cook type "57" interior terminal box

The type 57 interior terminal box is for distribution and termination of lead-covered or loom cable for low-voltage circuits. The box itself which has an Underwriters' Laboratory listing is constructed of smoothly enameled steel, with hinged cover and necessary knock-outs. Fanning strips and terminal strips are provided as well as screw connectors on the drop sides and solder clips for cable wires.

the battery that lasts practically forever



gould planté

For long life and uniform dependable service, no other telephone battery equals the Gould Planté. It has rolled up amazing performance records, remaining in active full-float service for 20 years, 30 years and longer!

In the Planté, *all* of each positive plate is pure lead, containing *no* antimonial impurities. Thus, Gould has eliminated the primary cause of self-discharge, capacity losses and shortened battery life. Planté batteries float at constant voltage and maintain rated capacity all their life. Because they almost never need service, maintenance is negligible. If you would cut battery costs to a minimum, choose Planté.

Made by GOULD-NATIONAL BATTERIES, INC.

with Copperweld TRADE MARK **LINE WIRE**

Many years of severe weather experience have convinced leading telephone companies that the permanent high strength of Copperweld Line Wire really pays off in better performance and lower costs. Along with the necessary ruggedness to resist heavy ice and wind loads, Copperweld permits safe, economical, long-span construction—offers complete protection against corrosion—and has better voice and high frequency transmission characteristics than any other high-strength conductor.

If you are interested in securing all these superior advantages at lower overall costs —make sure you use Copperweld Line Wire.

Distributed by STROMBERG-CARLSON

ROCHESTER 3, NEW YORK

...MENT AND ELECTRONIC CARILLONS • INDUSTRIAL, INTERCOMMUNICATION SYSTEMS • TELEVISION, RADIOS AND RADIO-PHONOGRAPHS

assistant vice president of Southwestern Bell Telephone Co.

Presently in office are Charles W. Potter, Indianapolis, Ind., vice president and general manager of Indiana Bell Telephone Co., as director; and Ralph F. Lucier, Warsaw, Ind., president of United Telephone Co. Inc., as deputy director.

V V

E. M. Purcell Shares Nobel Prize in Physics

Dr. Edward M. Purcell, former employe of Illinois Consolidated Telephone Co., Mattoon, Ill., recently shared the Nobel prize for physics, through the discovery of a refined method of measuring magnetic fields in atomic nuclei by himself and a co-worker.

Dr. Purcell is the son of E. A. Purcell, long-time vice president of the Illinois Consolidated company.

V V

General of Illinois Sells Bonds

The General Telephone Co. of Illinois, with headquarters at Springfield, on Nov. 18 sold 3 million dollars in 4¼ per cent debentures to two insurance companies, it was announced by the company president, Burton W. Saunders. The major portion of this additional capital will be used by the company to retire present bank loans outstanding.

Reaching Out for More Dollars

(Continued from page 22)

(22) "I think an Informational in the listing column gets more attention than display."

Informational listings are very fine from an attention viewpoint. It is a matter of how much and how you wish to display your message. Excellent results are obtained from display advertising. Cuts can be used to tell the story, larger type is allowed and more white space can be used."

* * *

(23) "Too much business now—but when the business slows down, I'll want some advertising."

The directory comes out once a year. It may be too late. (See No. 17.)

* * *

(24) "That's too much money, just for bold type."

"It may seem high but it is published in _____ directories which are on the job 24 hours each day. (Quote number of cents per day.) Make your name easier to find and people will recognize the fact that you are out after business."

* * *

(25) "I'm just working for myself, and don't want so much business that I have to hire anyone."

"But, I believe you would like to pick your customers and receive more profit from quality accounts. By having more calls, this can be accomplished. You can word your directory advertising in such a manner that you can attract the business you wish."

* * *

(26) "The ad I have is O.K. Just leave it as it is."

"I am happy you are satisfied, but I have a suggestion which I believe will bring you better results and more profits." (Dig deep into fact finding.)

* * *

(27) "My telephone bill is too high now."

"Your advertising is billed on your telephone bill for a convenient method of payment, but it is not part of your telephone service costs. It should be charged to your advertising costs. An improvement in your directory advertising will bring you more customers and a greater profit."

* * *

(28) "Directory advertising brings in the wrong kind of calls: Bad credit risks, shoppers and other poor customers."

"That perhaps is true. On the other hand the good customers are also going to look in the directory. That is the market you *want* covered. Regardless of the media used the same problem confronts you. The more calls you receive from directory advertising, the more desirable customers you will obtain. People having telephone service are considered better customers than the group not having telephone service."

* * *

(29) "My business is all *contract*. I don't want local calls."

"Your message can be so worded as to attract only customers desiring contract service and at the same time make it more convenient for your present customers to call you. It will permit you to explain your services and tie in with recommendations present customers have given to some of your potential customers."

* * *

A thorough study of these "objec-

PERSONALIZED SERVICE

SERVICING THE INDEPENDENT TELEPHONE INDUSTRY

A Complete Line of Nationally Known Telephone Supplies

The Lindsay Telephone Supply Co.

Tel. ENdicott 1-0110 CLEVELAND 3, OHIO 7016 Euclid

tions" and the suggestions as to how to meet them, and conducting a few "trial cases" on your employes, will assist you greatly in selling directory advertising.

Directory advertising produces worthwhile revenue and all small telephone companies which do not include advertising in their directories should take immediate steps to "cash in" on this revenue.

(The End)

v v

In the Nation's Capital

(Concluded from page 14)

fiscal year ending June 30, 1952, show a further increase to almost $706,000,000, the report stated. The NARUC followed the advice of its committee and passed a resolution calling for the revision of excise taxes on communications services to the level "at most no higher than the tax rate applied to other non-luxury services. . . ."

Another NARUC committee report of interest to telephone companies was the report of the committee on rates of public utilities. This committee found that, while the cost of living has increased 86 per cent in the last few years, telephone rates have increased by less than half that amount. At the same time, the number of telephone subscribers has just about doubled, requiring unprecedented plant expansion at ever-increasing prices—about double those at the end of the war. The Bell System, as well as Independent telephone companies, have experienced increased costs of operations, not only in exchange but also in toll operations, the report said.

The rate committee noted that Independent companies have had no general increases in the toll compensation schedules subsequent to 1946 and said cost studies are currently being made by the Independent industry looking toward upward revision of these schedules.

v v

OBITUARIES

COMMODORE N. BEAVER, 90, of York, Neb., died of a heart attack at Liberal, Kan., enroute to Phoenix, Ariz., on Nov. 12. He had been a director of The Lincoln Telephone & Telegraph Co. since 1912 and before that had pioneered in the early development of the Independent industry in Nebraska.

He became interested in the telephone in 1897 when he helped organize the Wacc (Neb.) Telephone Co., which was shortly thereafter consolidated with Independent companies at Bradshaw and Benedict to form the York County Telephone Co.

Mr. Beaver became a director of the York company and later was president of the Fremont (Neb.) Independent Telephone Co., where he was instrumental in establishing early toll connections to Omaha. He was foreman of the construction crew which built the first toll line from Seward to Grand Island to St. Paul, Neb.

Born in Lincoln, Ill., he moved to York in 1887 and was a farmer and banker there for many years in addition to his interests in the telephone business. He was president of the City National Bank and City Trust Co. of York. He was also prominent in civic affairs and served as mayor and councilman at York and president of the Chamber of Commerce there.

He was a charter member of the Frank H. Woods Chapter of the Independent Telephone Pioneer Association.

* * * *

STELLA M. CLARK, 60, died at Auburn, Neb., on Nov. 20 after an extended illness.

A life-long resident of Auburn, Miss Clark had been chief operator of The Lincoln Telephone & Telegraph Co. there since 1926. Her first telephone work was with the Auburn Telephone Co. when she served as an operator from 1912 to 1918. In 1919, she was employed by the Lincoln company as an operator; she became assistant chief operator in 1925 and chief operator in 1926.

She was a charter member of the Frank H. Woods Chapter, Independent Telephone Pioneer Association, and served on several of its committees.

* * * *

Mrs. MARY E. SANDS, 73, died on Nov. 18 after an illness of four months. She was the wife of Roy Sands, president and owner of the Crown Telephone Protection Co., Waukegan, Ill.

In addition, Mrs. Sands is survived by one daughter, Mrs. Rachel Rafael of Munich, Germany; a sister, Mrs. Josie Hulse of North Olmsted, O., and a grandchild, Kenneth Sands. Mrs. Sands' only son, Granville, died in 1934.

* * * *

WILLIAM C. CORMAN, 72, died of a cerebral hemorrhage at his home in North Vernon, Ind. on Nov. 15. He had been in poor health for several years.

Mr. Corman entered the telephone

Serve Up Strand Ends
Quickly and Securely
With KEARNEY
GUY WIRE CLIPS
This method of serving up strands is considerably more economical than the old method of using waste strand. Easily installed in one-fourth the time required by the older method, they serve up the guy strand ends more neatly and do not scratch or peel the strand galvanizing.
Available in six sizes in aluminum, galvanized iron or copper. Can be installed with pliers or with special Kearney Guy Wire Clip Tool.
JAMES R. KEARNEY CORPORATION ST. LOUIS, MO.
108
JAMES R. KEARNEY CORPORATION
4236 CLAYTON AVE. • ST. LOUIS 10, MO.
Overhead and Underground Utility Equipment

business in 1901 and was active in the construction of many Independent telephone plants in Kentucky, Tennessee and Indiana. He managed operations at Mayfield, Carlisle and Maysville, Ky., and Salem and North Vernon. He retired several years ago.

Survivors are his widow, Bertha Wilman Corman; daughter, Margaret L. Corman of Washington, D. C.; brothers, Minor Corman of Atmore, Ala.; Daniel B. Corman of Louisville, Ky.; Richard Corman of Harrodsburg, Ky., and a sister, Mrs. Henry T. Pipes, Clanton, Ala.

* * *

O. L. STURTEVANT, 57, of Lincoln, Neb., died at a Lincoln hospital on Nov. 16 after an extended illness. He was plant statistician of The Lincoln Telephone & Telegraph Co. and had been with the company for 40 years.

He entered the telephone business at York, Neb., in 1912 as a combination-man and moved to Lincoln in 1921 when he became a testman at the toll testboard. In 1932, he was appointed supervisor of mails and in 1942 became plant statistician on the staff of the general plant superintendent.

He was a charter member and past president of the Frank H. Woods Chapter of the Independent Telephone Pioneer Association.

V V

Transistor Goes to Work In Customer Toll Dialing

The transistor, tiny electronic amplifier invented at Bell Telephone Laboratories and called the first serious rival of the vacuum tube, went to work for the first time in the nation's telephone network the week of Oct. 20.

The revolutionary new device is being used in a trial installation in dial switching equipment in Englewood, N. J., as a part of the customer long distance dialing service introduced by the Bell System there last year. Englewood customers are able to dial, direct, to reach telephones in such distant cities as Cleveland, Chicago and San Francisco.

While transistors can do many of the things vacuum tubes can do, they can do other things in addition, and they are quite unlike vacuum tubes. They are much smaller, more rugged and require much less power.

The new transistor units tried at Englewood generate the electrical signals by which the numbers of the called telephone are sent from one central office to another. This is now accomplished by vacuum tubes embodied in

Two Bell laboratories men are shown with the new customer toll dialing equipment. Left is F. E. BLOUNT, who helped develop the oscillator, and right is Dr. WILLIAM SHOCKLEY, who directed Bell's transistor research project. Mr. Blount holds one of the transistors, six of which are used in each oscillator.

a large assembly serving a number of circuits within a single telephone central office. Signals thus generated must be distributed through special cable to the individual circuit.

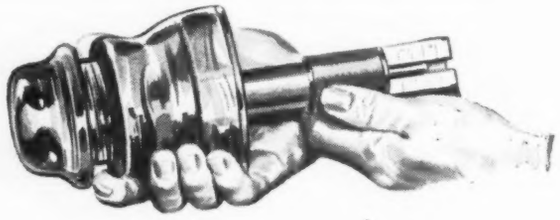
With the new transistor equipment—much smaller, and less expensive than the vacuum tube units—the signalling equipment, instead of being centrally located, can be placed exactly at the points where it is needed. The new units, unlike vacuum tube units to which heating power must be continuously supplied, operate only when needed and use very little power. They will also require much less maintenance.

One unit can be operated on less than half the power required by an ordinary electric clock, and on a single telephone call, the unit will be called into use for not more than two seconds.

The transistor units, known as oscillators, are being used in sending out electrical signals in the form of six musical tones of varying frequencies, combinations of which represent the digits of a telephone number. After being transmitted, the musical tones are converted back to ordinary electrical signals at the receiving central office.

Trial installation of the new units is being made in Englewood in cooperation with the New Jersey Bell Telephone Co. Western Electric Co., manufacturing and supply unit of the Bell System, is manufacturing the equipment. Bell Laboratories engineers are working closely with Western Electric in production of the transistors used.

Transistors are made up of cold, solid substances; they require no heat-



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Get further information from your supplier or write Armstrong Cork Company, Glass and Closure Div., 295 Fifth Ave., New York 16, N. Y.

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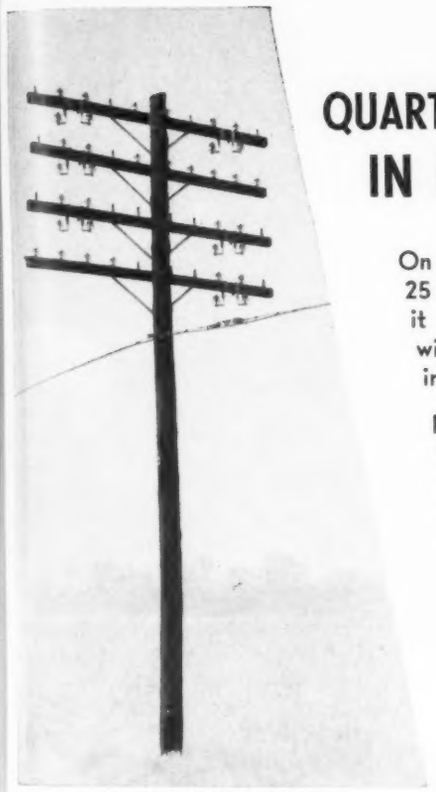
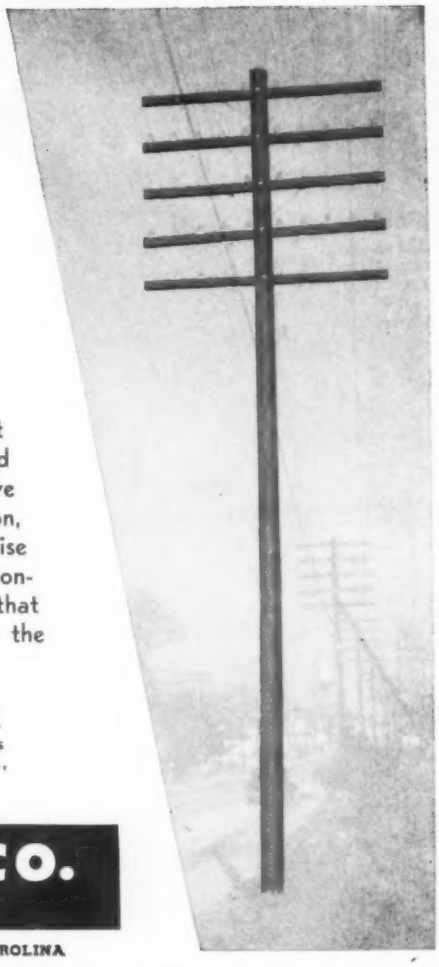


MORE THAN A QUARTER CENTURY PROGRESS IN POLE PRODUCTION

On the left is a Taylor-Colquitt pole set 25 years ago. Still sound and serviceable, it nevertheless stands in sharp contrast with one on the right which was recently installed.

For to good timber and good treatment have been added many improvements and refinements during the years that have passed. In such things as timber selection, machine trimming, vapor drying and precise treatment, Taylor-Colquitt has set constantly higher standards to insure that Taylor-Colquitt poles shall always be the best that can be obtained.

Taylor-Colquitt poles are distributed to independent telephone companies exclusively by Automatic Electric Sales Corporation, 1033 W. Van Buren St., Chicago 7, Illinois



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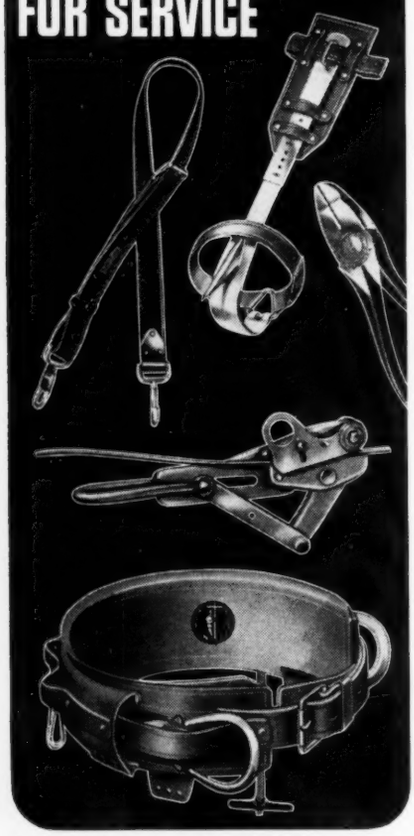

Yes, safety and service are the two big reasons why Kleins are the choice of the man on the pole. Look for the familiar Klein trade-mark on pliers and climbers, safety straps and belts, lag wrenches and grips. It has been a trade-mark of quality "Since 1857."

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ing element which causes warm-up delay, and there is no glass envelope or vacuum. One type of transistor, about the size of a pea and using less power than is required by a pocket flashlight, can amplify an electrical signal about 100,000 times.

In addition to use in the new oscillators, transistors are also going to be used in other telephone equipment within the next few months. Two types will be used in equipment known as "card translators," which have been undergoing final development. When installed in telephone central offices, these translators will serve as automatic routing devices for setting up long distance calls across the country. They will signal the automatic switching systems, telling them what route the call should take, and the type of electrical signalling to be used in reaching the called party, and what to do if the first route is found busy. For an average call, this equipment will perform its translating function in about a third of a second.

V V

ACS Anchorage-Tok Landline Adds Vital Communication Link

Another chapter in the story of the ever-expanding Alaska Communication System (ACS) facilities was written on Oct. 6, with the completion of the Anchorage-Tok landline. The new landline forms a vital link in the vast ACS communications network, according to Col. Fred P. Andrews, ACS commanding officer in Seattle, Wash.

Built under contract by the Western Electric Co., the new landline covers a distance of 337 miles between Anchorage and Tok Junction with additional facilities on the existing line from Tok to Fairbanks. Generally the landline parallels the roadway between the two points, thus facilitating the construction work and making the line more accessible for maintenance and trouble shooting. The primary purpose of the line is to increase both the number of voice and telegraph channels between Anchorage and Fairbanks for vital military communication. The line additionally serves other government, territorial and civilian users.

Building the telephone line in Alaska was no easy assignment with temperatures hovering as low as 70 degrees below zero in winter and climbing to 90 above in the summer. Telephone poles had to be set deep into ground that remains permanently frozen the year around; otherwise the earth would have heaved the poles upward when the temperature changed.

Modern communications have caused many changes in methods of doing business in Alaska. Old sourdoughs, who formerly sent their messages by dog teams or bush pilots, are fast becoming acquainted with these modern conveniences and are among the greatest users of the lines.

The new landline also provides limited telephone facilities to homesteaders and small communities on the highway, as well as service to the public and travellers at strategically located toll stations.

To make these facilities available required construction of six new repeater stations costing $2,150,000. These were built at Sheep Mountain, Glenallen, Tok Junction, Big Delta, Johnson River and Harding Lake. The construction of 337 miles of telephone line and the electronic equipment installed in the new repeater buildings by Western Electric cost approximately 4½ million dollars.

The new landline ties in with existing lines along the Alaska Highway, providing quicker and better service between Anchorage and Fairbanks, and Fairbanks and the United States. Upon completion of new toll buildings at Anchorage and Fairbanks, switching between these points will be done by means of automatic toll dialing, enabling the ACS operator at one station to dial directly to a customer in the Anchorage and Fairbanks area without assistance. These facilities are designed to become a part of the toll dialing system for continental North America.

The new line takes its place with many other special toll telephone and telegraph installations which help the Armed Forces protect the nation.

In constructing the new line, the Western Electric Co. had the cooperation of other Bell System units, particularly the Long Lines department of the American Telephone & Telegraph Co. and the Bell Telephone Laboratories.

V V

Correction

TELEPHONY on Nov. 20 received information that Carl G. Hedstrom of Phoenix, Ariz, should have been on the list of the deceased, given in the report of the annual meeting of the Independent Telephone Pioneer Association (Nov. 1, p. 18), instead of Carl E. Hedstrom of Hastings, Neb., who is an active member of the Frank H. Woods Chapter of the ITPA.

V V

"To be successful, a company must be staffed with men who not only do a good job but who enjoy doing it."—I. W. WILSON, *President, Aluminum Company of America.*

Selecting Size of Batteries With a Capacity Curve

By K. A. VAUGHAN
Supervisor, Field Engineering
Gould-National Batteries, Inc.
Trenton, N. J.

WHEN properly used, a battery capacity curve can tell how many and what size batteries will supply a given power requirement. By using battery capacity curves, a user can check and be doubly sure not to choose under-capacity batteries that do not provide adequate reserve or over-capacity batteries that call for unwarranted initial cost.

Battery capacity, the total amount of energy a battery delivers as its voltage drops from initial to final value, depends on the temperature of the electrolyte and the rate at which the battery is discharged. Discharge rate is measured by the number of hours required to discharge the battery at constant current. Capacity is measured either by the ampere-hours a battery will deliver between charges or by the current in amperes it will deliver while being discharged. Batteries do not actually discharge all of the energy they store, but are considered to be discharged when their voltage reaches an arbitrary final value, usually taken as 1.75 volts per cell.

A capacity curve is the plot of the capacity per positive plate versus the ampere discharge rate for a given temperature and to a specified final voltage (see *Fig. 1*, p. 40). This curve is drawn for final voltage (F.V.) of 1.75 volts and for an operating temperature of 77 degrees F. Hour discharge rates are represented by straight lines through the origin intersecting the curve marked F. V.

To find the capacity per plate for a particular battery, select an hour discharge rate and find the intersection of the appropriate hour discharge-rate with the curve marked F. V. on the capacity graph for that battery. The horizontal line through this intersection crosses the vertical axis at the ampere-hour capacity per positive plate and the vertical line through the intersection crosses the horizontal axis at the ampere capacity per positive plate.

As an example, suppose that batteries of Gould Type XVL-Z are to be discharged at the six-hour rate. In *Fig. 1*, the appropriate capacity curve for this battery, find the intersection of the six-hour discharge-rate line with the final voltage curve. Following the horizontal line "A" and the vertical line "B" shows the ampere-hour capacity to be 40 ampere hours per positive plate and the ampere capacity to be 6.7 amperes per positive plate.

Current and duration of discharge determine the ampere-hour capacity by the formula:

Ampere-Hour Capacity = (current in amperes) × (hours of discharge).

For greater accuracy, read the larger of these values and convert to the other with this formula. In our example we can read 40 ampere-hours from line "A," then divide by 6 hours to set the ampere capacity of 6⅔ amperes.

The following values were obtained

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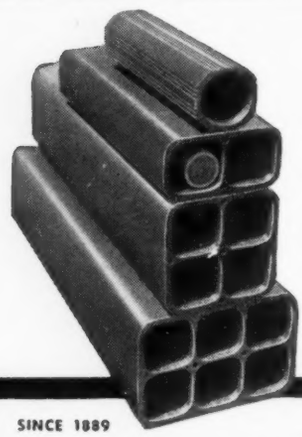

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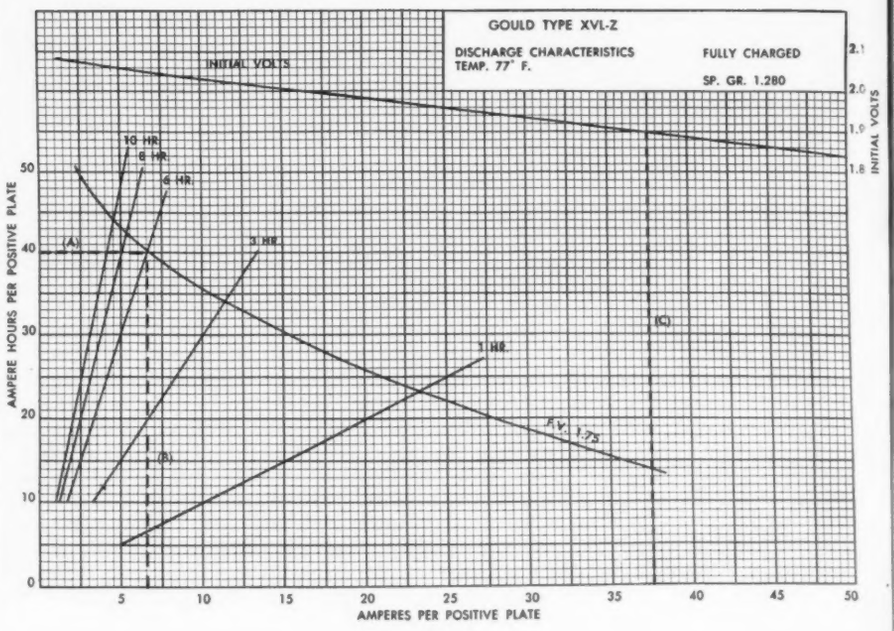

Fig. 1

from the graph by the procedure outlined above:

HOUR DISCHARGE RATE	CAPACITY PER POSITIVE PLATE AT 77 F. TO A 1.75 F. V. AMPERE-HOURS	AMPERES
10 Hr.	44.0	4.40
8 Hr.	42.5	5.31
6 Hr.	40.0	6.66
3 Hr.	34.0	11.33
1 Hr.	23.4	23.40

The values listed in the table are per positive plate. To find the capacity for the cell, multiply the number of positive plates in the cell. By using these and similar data for other battery-types, the battery user can tell which battery described by the curves is the size he needs and how many of these batteries will do the job.

Capacity curves for various final voltages (in addition to the 1.75 volt curve shown here) and tables similar to the one above are prepared for each industrial battery and are available from manufacturers. In selecting batteries, the ampere-hour capacity requirement for each plant operating shift should be considered as 80 per cent of the actual requirement. Thus, ample surplus is assured for future additional power needs.

The initial voltage depends on the rate of discharge and can be determined by following the vertical ampere line to the initial voltage line at the top of the graph and then reading the initial voltage from the scale on the right. For example, the initial voltage at a discharge rate of 35 amperes per positive plate is 1.90 volts per cell, as was determined by following the line "C" up from 37.5 amperes to the initial voltage line.

The following values were determined from the curve:

INITIAL VOLTAGE PER CELL AT VARIOUS DISCHARGE RATES HOURS	AMPERES	I. V.
10	4.50	2.061
8	5.31	2.059
6	6.66	2.050
3	11.33	2.023
1	23.40	1.967

V V

Leich Places Bond Issue

Roy W. Siemund, president of the Leich Electric Co., recently announced that it had placed privately with an insurance company $500,000 of 4¼ per cent debentures for additional capital to provide greater manufacturing space and warehouse facilities, construction of which was begun recently at Genoa, Ill. (TELEPHONY, Nov. 22, p. 50).

V V

Lucier, Gordon Named By Stromberg Finance Corporation

Phillip J. Lucier has been elected a vice president and George Gordon has been named assistant secretary and counsel of the Stromberg-Carlson Credit Corp., Rochester, N. Y., according to Gordon G. Hoit, president. This action of the directors, according to Mr. Hoit, takes place approximately a year and a half after the formation of the loan corporation and recognizes the ability of Mr. Lucier who has acted as manager since the start and Mr. Gordon who has been its legal counsel.

The Stromberg-Carlson Credit Corp., a subsidiary of Stromberg-Carlson Co., was organized in January, 1951, to

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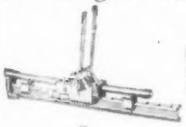

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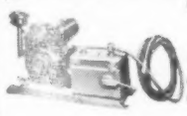

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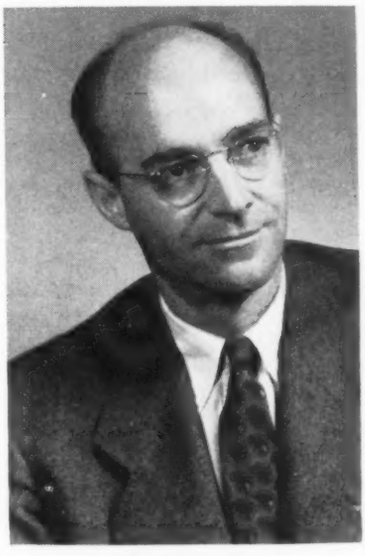
P. J. LUCIER

make funds available for Independent telephone companies to borrow on a long-term basis for the purchase of telephone equipment. To date, according to Mr. Hoit, the corporation has arranged loans totaling several million dollars and a highly satisfactory percentage of this amount has resulted in new XY dial switchboard business for the parent company.

Mr. Lucier is also manager of the telephone finance department of the



GEORGE GORDON

Stromberg-Carlson Co., having previously served as telephone sales representative in the southeast section of the country. Mr. Gordon is also assistant secretary of the parent company, having been associated previously with the law firm of Nixon, Hargrave, Devans and Dey, Rochester.

The other officers and directors of the Stromberg-Carlson Credit Corp. are: President, Gordon G. Hoit; vice president, Arthur F. Gibson; treasurer, Charles W. Pritchard; secretary, Ed-

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P. S. The six-inch 8-way is especially good for rural line guying. Only one size need be stocked . . . it fits both ½" and ⅝" rods. It fits in a six inch hole and expands to 70 square inches.

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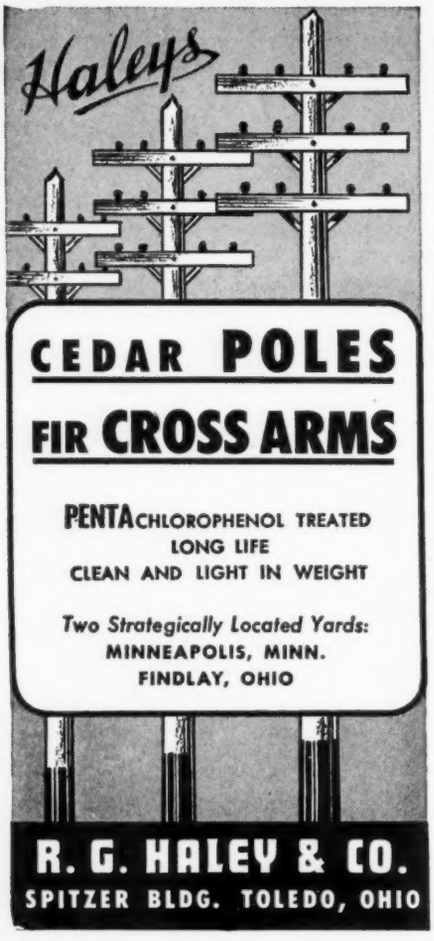

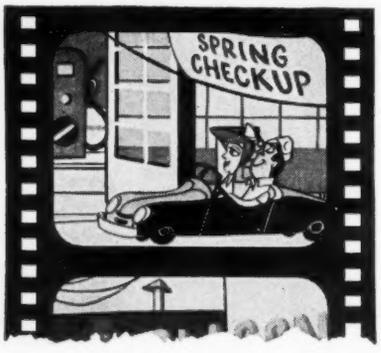

At your age!

If you are over 21 (or under 101) it's none too soon for you to follow the example of our hero, Ed Parmalee (above) and face the life-saving facts about cancer, as presented in our new film "Man Alive!".

You and Ed will learn that cancer, like serious engine trouble, usually gives you a warning and can usually be cured *if treated early.*

For information on where you can see this film, call us or write to "Cancer" in care of your local Post Office.

American Cancer Society

win C. Roworth, and Robert C. Tait, president of the parent company.

V V

J. G. Cavanagh Appointed Sales Engineer by Copperweld

Paul Van Wagner, vice president in charge of sales, of Copperweld Steel Co.'s wire and cable division, recently announced the appointment of J. Gordon Cavanagh as sales engineer covering the lower peninsula of Michigan and the entire state of Indiana.

Mr. Cavanagh will make his headquarters in Detroit as did Donald T. Jones, his predecessor. Mr. Jones is temporarily on a leave of absence from the Copperweld Steel Co. and is serving with the United States Navy.

J. G. CAVANAGH

Mr. Cavanagh's many years of electrical engineering experience should be extremely helpful to all those he will contact in his territory. After graduating from Washington University, St. Louis, where he received his B.S. in Electrical Engineering, Mr. Cavanagh spent the next three years as a field supervisor with Illinois Power Co. and Missouri Power & Light Co.

In 1941, he joined the engineering department of Iowa Power & Light Co., at Des Moines. The following year he was made substation engineer. Then he advanced to engineer of relays and electronics, handling relay engineering and carrier current work.

In 1949, he was promoted to engineer of overhead lines, in charge of the design, construction, operation and maintenance of the overhead system from 120/240 volt secondaries to 161 KV transmission.

Mr. Cavanagh is a member of AIEE, having been membership chairman and on the board of directors of the Iowa section. He also served on the National Committee for Utilities Radio since 1946.

Blair Succeeds Pritchard For Stromberg-Carlson

W. W. Blair, central office equipment engineer for the Minnesota Telephone Co., Minneapolis, Minn., has joined the sales organization of Stromberg-Carlson Co. This announcement is made jointly by T. C. Thompson, telephone sales manager, and W. J. Pfaender, manager of the Chicago branch.

W. W. BLAIR

The entire state of Iowa, the territory formerly covered by W. R. Pritchard, who has resigned, will be served by Mr. Blair. Mr. Blair grew up in Dayton, Ohio. Shortly after graduating from Stivers High School he joined the Signal Corps, teaching teletype installation and maintenance at Fort Monmouth, N. J. For two years, starting in December, 1941, he was stationed in Puerto Rico where he supervised first the outside plant and then the equipment installation of one 2,000-line and two 1,000-line step-by-step dial offices.

After further schooling in step-by-step dial installation and maintenance, Mr. Blair was sent to Assam, India, where he was in charge of a 16-man crew maintaining switchboards and carrier systems. In 1945, he was released from the Army and continued in telephone work as wire chief of a 600-line dial office at Columbus (Ohio) Depot. He later became Administrative Signal Officer (civilian) there.

From June, 1947, to the present he has worked in all phases of the Minnesota Telephone Co., which serves 22,270 stations in three states.

V V

» The United States has about 28 telephones for every 100 persons or twice the number in 1925.

BOOK REVIEW

"WRITING THE TECHNICAL REPORT," by J. Raleigh Nelson, professor emeritus of English, college of Engineering, University of Michigan. Third edition. 356 pages. Price $4.50.

The author of this guide book says that if report writers "could regard a report as designed to meet certain definite requirements like any structure destined to carry a load, they would save themselves many failures." The fundamental principles of order and planning and style presented in this book can help anyone produce technical papers and reports that are models of clarity, coherence, and completeness, the publishers say.

"Writing the Technical Report" suggests a method of approach to the task of organizing technical reports, and a method of producing them. Both will better prepare a report writer to grasp and evaluate salient features in a problem. They are psychologically sound methods which, if intelligently followed, can produce effective written reports with a minimum of effort, say the publishers.

The revised third edition tells how to select the kind of report needed, how to choose the best form and style for it, how to organize the contents, and how to use figures, tables and annotations. It also sets up standards of criticism and outlines certain simple critical procedures which report writers can apply to their own work. The author's many years of experience in preparing, supervising and criticizing technical reports enable him to point out numerous faults in report writing and to show how they can be avoided, the publishers state.

The book contains five major parts: (1) Design and composition; (2) specific directions for setting up both long and short form reports (illustrated with sample annotated reports); (3) systematic procedures for critically examining and evaluating written reports; (4) a summary of report writing principles organized for quick reference, and (5) a detailed 16-week course in report writing that supplies self-study guidance and practice.

For 45 years, J. Raleigh Nelson has been helping engineers and technical men use the English language effectively. He is now professor emeritus of English in the college of engineering, University of Michigan, where he taught for 25 years. He has served frequently as special technical writing consultant to industries and institutions here and abroad, and to research groups in the U. S. Army and Navy.

This book may be purchased through TELEPHONY.

V V

"All of us today are suffering from too much 'taking away' and none of us like it. The next pay envelope or pay check you receive will reveal what we mean. Take a look at the amount of federal withholding tax which the government tells your employer must be 'taken away' from your earnings and the shrunken condition of your take home pay, and you'll join with everybody—even with the . . . . politicians, the big city machine bosses, the New and Fair Dealers, the Palace Guard and the social planners in hollering loudly, 'Don't let 'em take it away!' "—Emporia (Kans.) *Gazette*.

V V

>> Where do Americans put their money? A new study by Brookings Institution shows that life insurance, owned by four out of five families, is the most popular investment for savings. Next came savings accounts, held by about one in two families, then U. S. Series E bonds, held by about four of 10 families.—UNITED STATES CHAMBER OF COMMERCE.

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